



STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

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MGSP Permit Tracking Number: AKR06AC58

APDES Individual Permit Number: AK0053341

Facility Name: Pogo Mine
Operator: Northern Star (Pogo) LLC

Operator Approval and Certification of the Storm Water Pollution Prevention Plan Amendment

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature 

04/22/2020
Date

Jillian Ladegard, Environmental Manager
Name and Title

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Telephone Number

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AMENDMENT LOG

Facility Name: **Pogo Mine**

Operator: **Northern Star (Pogo) LLC**

Amendment No.	Date	Brief Description of Amendment	Prepared By
1	Jan, 2012	Updated and combined SWPPP and BMP plan in conjunction with Pogo's APDES Permit renewal.	Ben Farnham
2	Jan, 2014	Changed Pogo logo and updated names and titles	Ben Farnham
3	Jun, 2015	Updated to MSGP AKR060000 April 1, 2015 – March 31, 2019	Ben Farnham
4	Jan 30, 2016	Updated SWPPP, team roster, annual report, MDMR, inspections, visual exams, spill log, training records.	Pogo
5	Jan 21, 2017	Updated SWPPP, team roster, clarified reference to surface exploration roads, updated figures and maps.	Pogo
6	Aug 21, 2017	Update BMPs to reflect the new APDES permit AK0053341. Effective July 1, 2017.	Pogo
7	Sept 5, 2018	Update BMPs to reflect the facility and to include the Pogo Access Road and bridges. Effective September 5, 2018	Pogo and Shannon & Wilson, Inc.
8	Jan 24, 2020	Updated ownership to Northern Star (Pogo) LLC	Pogo
9	April 22, 2020	Reviewed SWPPP and updated forms for 2020 MSGP compliance effective July 29, 2020.	Sealaska Remediation Solutions, LLC.

DEFINITIONS AND ACRONYMS

ADEC	Alaska Department of Environmental Conservation
APDES	Alaska Pollution Discharge Elimination System
BMP	Best Management Practices
DMR	Discharge Monitoring Report
DSTF	Dry Stack Tailings Facility
mg/L	milligrams per liter
MSGP	Multi-Sector General Permit
NOI	Notice of Intent
NOT	Notice of Termination
NTU	Nephelometric Turbidity Units
RCRA	Resource Conservation and Recovery Act
RTP	Recycled Tailings Pond
SCP	Storm Water Collection Pond
SDS	Safety Data Sheets
SWP	Safe Work Procedure
SPCC	Spill Prevention, Control, and Countermeasure
SPPT	Storm Water Pollution Prevention Team
SWPPP	Storm Water Pollution Prevention Plan

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QUICK REFERENCE COMPLIANCE GUIDE – POGO MINE SWPPP

Quarterly

- **Routine Facility Inspections:** Conduct a quarterly facility inspection including: check vehicles, equipment, and material storage areas for leaks, drips, or other potential sources of pollution. Check stormwater BMPs for efficacy and required maintenance. Keep records of completed inspection forms in the SWPPP. (Attachment I)
- **Quarterly Visual Assessments of Stormwater Discharges:** Conduct a quarterly facility inspection and sample stormwater discharges. Submit completed Discharge Monitoring Reports (DMRs) to the ADEC. <http://dec.alaska.gov/water/oasys/index.html>. Keep records of completed DMRs in the SWPPP. (Attachment H)

Annually

- **Comprehensive Site Inspection:** Once per year conduct a Comprehensive Site Inspection for compliance with permit and SWPPP, checks recordkeeping, and reviews BMP's. Maintain records of completed inspections in the SWPPP. (Attachment I)
- **SWPPP Training:** The Stormwater Pollution Prevention Team and employees involved in operations shall attend annual training. Keep records of annual training in the SWPPP (Attachment N and Appendix H).
- **Annual Report and Certification:** Complete and submit the MSGP Annual Report Form to ADEC. <http://dec.alaska.gov/water/oasys/index.html>. Due February 15th of each year (Attachment L). Sign the Annual Certification of Compliance Form (Section 7.0 of this SWPPP, Attachment M)

As-Needed

- **Heavy Rainfall Inspections:** Conduct inspection of stormwater controls during a measurable storm event (as defined in the MSGP) with 0.5 inches of precipitation in a 24-hour period. The Storm Event Inspection form is used and includes examination of potential pollutant sources.
- **Implement Corrective Actions:** The following will trigger implementation of corrective actions. Record in SWPPP.
 - Non-conformances, illicit discharges, and other sources of pollution observed during routine and quarterly inspections.
 - Activities or conditions which cause a spill.
 - Exceedance of benchmark value in quarterly discharge sample.
- **Promptly Clean-up Spills:** Contain and clean up spills, drips, and leaks as soon as reasonably possible. Record events in SWPPP.

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1. SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

This combined Storm Water Pollution Prevention Plan (SWPPP) and Best Management Practices (BMP) Plan (collectively, the "Plan") conforms with the required elements of the Alaska Pollutant Discharge Elimination System (APDES) Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity # AKR060000 (MSGP) effective April 1, 2020 to March 31, 2025, a copy of which is included as **Attachment A**. Pogo plans to file a Notice of Intent (NOI) prior to July 29, 2020, and coverage under the MSGP became effective April 1, 2020, refer to **Attachment B**.

This Plan also contains the information required under Section 2.2: Best Management Practices Plan of the APDES Individual Permit #AK0053341 issued on July 1, 2017 and effective August 1, 2017 to June 30, 2022, by Alaska Department of Environmental Conservation (ADEC), a copy of which is included as **Attachment C**. Although SWPPP and BMP Plans are typically prepared as separate documents (under each plan's respective permit), Pogo has combined them into a single plan as a more effective tool, preventing releases of pollutants to the waters of the United States (U.S.). However, the SWPPP provisions are only applicable to the MSGP (AKR060000), and the BMP Plan is only applicable to the individual APDES Permit (Permit #AK0053341). This document will refer generally to the combined SWPPP and BMP Plan as "the Plan," (as noted above) but references the SWPPP requirements for the MSGP and the BMP Plan requirements for the APDES Permit separately when discussing provisions that are unique to each respective permit.

This Plan covers the prevention and control of storm water and waste water discharges associated with the operation of the Pogo Mine under the MSGP and individual APDES Permit.

The Plan has five main objectives:

- Identify pollutant sources and activities that may affect the quality of storm water and waste water discharges associated with operation of the mine;
- Identify non-storm water discharges;
- Identify controls, including BMPs, to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the site, and provide guidance to construct, implement, and maintain those controls and BMPs;
- Develop a maintenance schedule for installed BMPs to maintain the effectiveness of these BMPs;
- Prevent or minimize the generation and release of pollutants to the waters of the U.S.

This Plan describes the Pogo Mine and its operations, identifies potential sources of storm water pollution at the facility, and recommends appropriate BMPs and control measures to reduce the discharge of pollutants in storm water and wastewater discharges. This Plan provides other elements such as, but not limited to, a facility inspection program, site compliance evaluation program, and record keeping and reporting programs under the MSGP and individual APDES Permit.

The Plan will be modified and amended as necessary, as specified herein, to reflect amendments to the MSGP or individual APDES Permit or changes in the facility or operations of the facility that materially increase the generation of pollutants or their release, or potential release, to surface waters. The Plan will also be updated consistent with the triggering provisions in Section 5.6 of the MSGP and Section 2.2.7 of the individual APDES. The Plan shall be readily available on-site.

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1.1 Facility Information

Facility Information			
Name of Facility: Northern Star (Pogo) LLC.			
Street: 38 Miles NE of Delta Junction			
City: Delta Junction	State: AK	ZIP Code: 99737	
Borough or Similar Government Subdivision: Not applicable.			
Permit Tracking Number: AKR06AC58			
Latitude / Longitude			
Latitude: 66.4469° N		Longitude: -144.9367° W	
Method for determining latitude/longitude (check one):			
<input type="checkbox"/> USGS topographic map (specify scale: _____) <input type="checkbox"/> EPA website <input checked="" type="checkbox"/> GPS			
<input type="checkbox"/> Other (please specify):			
Is the facility located in Indian Country? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable.": Not applicable			
Is this facility considered a Federal Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Estimated area of industrial activity at site exposed to storm water: 360 acres			
Discharge Information			
Does this facility discharge storm water into an MS4? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If yes, name of MS4 operator: Not applicable			
Name(s) of water(s) that receive storm water from your facility: Goodpaster River.			
Are any of your discharges directly into any segment of an "impaired" water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If Yes, identify name of the impaired water (and segment, if applicable): Not applicable			
Identify the pollutant(s) causing the impairment: Not applicable			
For pollutants identified, which do you have reason to believe will be present in your discharge? Not applicable			
For pollutants identified, which have a completed TMDL? Not applicable			
Are any of your storm water discharges subject to effluent guidelines? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If Yes, which guidelines apply? Not applicable			
Primary SIC Code or 2-letter Activity Code (refer to Appendix D of the 2015 MSGP): 1041 (Refers to Sector G of the 2015 MSGP located in Attachment A)			
Identify your applicable sector and subsector: Metal Mining (Gold and Silver Ores) – Sector G of the 2020 MSGP			

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1.2 Contact Information / Responsible Parties

Facility Owner/Operator:

Name: Northern Star (Pogo) LLC.
 Contact: Jim Coxon
 Title: General Manager
 Address: 38 Miles NE of Delta Junction, Alaska
 City, State, Zip Code: Delta Junction, AK 99737
 Telephone Number: 907-895-2823
 Email address: J.Coxon@nsrltd.com
 Fax number: (907) 895-2866

SWPPP Contact:

Names: Jillian Ladegard
 Title: Environmental Manager
 Telephone numbers: 907-895-2879
 Email address: JLadegard@nsrltd.com
 Fax number: (907) 895-8266

1.3 Storm Water Pollution Prevention Team / Best Management Practices (SPPT/BMP) Committee

Table 1-1 identifies the SPPT/BMP Committee and defines their individual responsibilities.

TABLE 1-1: SPPT/BMP Team and Responsibility Summary

Names, Titles	Individual Responsibilities
Jim Coxon General Manager (907) 895-2823	<ul style="list-style-type: none"> ▪ Oversight and implementation of the SWPPP; and ▪ Signatory for all required documents, including the SWPPP and any certifications.
Jillian Ladegard Environmental Manager Team Leader (907) 895-2879	<ul style="list-style-type: none"> ▪ Ensure submittal of required Discharge Monitoring Reports (DMRs) ▪ Submit annual BMP Plan Certification and MSGP Annual Report ▪ Develop appropriate BMPs in response to changing site conditions ▪ Conduct annual SPPT/BMP Committee meeting ▪ Plan development, implementation, and revisions; and ▪ Development of any required corrective action plans and reports under the MSGP and APDES Individual Permit.
TBD Sr. Environmental Coordinator Spill Response Coordinator (907) 895-2761	<ul style="list-style-type: none"> ▪ Establish necessary spill emergency procedures and reporting requirements to isolate, contain, clean up, and remediate spills and emergency release of hazardous substances or oil, including Section 313 water priority chemicals, before a discharge can occur ▪ Secondary spill response coordinator and emergency contact ▪ Identify potential pollutant sources and recommend ways to minimize impacts through changes in operations, equipment, layout, and materials ▪ Oversee quarterly and annual visual inspections and required sampling ▪ Oversee the repair of all road, ground, and erosion control maintenance activities ▪ Obtain appropriate signatures on the inspection forms ▪ Coordinate the implementation of BMPs, review effectiveness of the program, and update the program as needed ▪ Oversee employee training; and ▪ Maintain and verify SWPPP and BMP records.

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Names, Titles	Individual Responsibilities
Mark Pliska Maintenance Manager (907) 895-2751	<ul style="list-style-type: none"> ▪ Oversee maintenance activities and recommend ways to reduce or eliminate hazardous materials ▪ Ensure that all fueling and maintenance activities are performed using BMPs by trained personnel ▪ Ensure that all road, ground, and erosion control maintenance activities are maintained using appropriate BMPs installed or repaired by trained personnel ▪ Maintain other control measures required ▪ Recommend appropriate modifications to the SWPPP/BMP Plan ▪ Provide spill response support to isolate, contain, and clean up spills and emergency releases of hazardous substances or oil, including Section 313 water priority chemicals, to minimize potential releases.
Paul Hobach Exploration Superintendent (907) 895-2769	<ul style="list-style-type: none"> ▪ Oversee maintenance activities and recommend ways to reduce or eliminate hazardous materials on surface exploration roads ▪ Ensure that all fueling and maintenance activities on surface exploration roads are performed using BMPs by trained personnel ▪ Ensure that all road, ground, and erosion control maintenance activities on surface exploration roads are maintained using appropriate BMPs installed or repaired by trained personnel ▪ Maintain other control measures required ▪ Recommend appropriate modifications to the SWPPP/BMP Plan ▪ Provide spill response support to isolate, contain, and clean up spills and emergency releases of hazardous substances or oil, including Section 313 water priority chemicals, to minimize potential releases.
Josh Murrell Safety Lead (907) 895-2480	<ul style="list-style-type: none"> ▪ Identify potential pollutant sources and recommend any necessary changes in operations, equipment, layout, or materials ▪ Be aware of changes that are made in facility operations and recommend appropriate modifications to the Plan.
Katie Schumacher Environmental Engineer (907) 895-2730 John Salzman, Environmental Coordinator (907) 895-2759 Nathan Kehoe Environmental Specialist (907)895-2760	<ul style="list-style-type: none"> ▪ Provide support in all phases of the SPPT/BMP Committee duties ▪ Perform quarterly and annual visual inspections, and any additional required sampling.

The SPPT required by the MSGP also serves as Pogo's BMP Committee required by the APDES Individual Permit. The SPPT/BMP Committee is charged with the responsibility to develop, maintain, and update or revise the SWPPP and BMP Plan, as necessary. The SPPT/BMP Committee meets annually to review the BMP Plan components in accordance with the APDES Permit. The SPPT/BMP Committee has ready access to either electronic or paper copies of applicable portions of the permits and respective SWPPP or BMP Plans. An annual statement certifying that the review has been completed and that the BMP Plan fulfills the requirements set forth in the APDES Permit will be prepared, signed and dated by each SPPT/BMP Committee member in accordance with the APDES Permit. This statement will be submitted to ADEC on or before January 31st of each year of operation under the APDES Permit. The SPPT/BMP Committee also oversees the BMPs training, inspections, monitoring, record keeping, reporting, and operational procedures required under the MSGP or APDES Permit.

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The following BMP Policy is provided pursuant to section 2.2 of the APDES Permit. Pogo recognizes that protection of the environment is essential. In order to minimize the impact of the operation on water resources, Pogo will:

- Reduce waste and minimize pollution
- Continually improve environmental protection performance
- At a minimum, comply with state and federal environmental laws, regulations, and permits
- Require all employees, contractors, suppliers, partners, visitors, and other third parties to adhere to the Pogo environmental protection requirements and applicable regulations
- Foster open and honest dialogue with stakeholders (specifically recognizing the importance of those who are affected by its operations) by promoting communication on the environmental protection practices of the mine; and
- Provide the necessary financial, staff, equipment, and training resources to develop and implement the Plan.

1.4 Activities at the Facility

Pogo extracts gold from an underground ore body in the Tanana foothills northeast of Delta Junction, Alaska. Activities conducted at the mine include mining, mill processing, tailings storage, paste backfilling, development rock storage, and water management. The total disturbed area of the site is approximately 360 acres.

Mechanized drift and fill mining methods are utilized to excavate ore from the Pogo deposit. The mine is accessed through four portals (1525, 1690, 1875, and 2150). The ore is transported with front end loaders and haul trucks to an underground ore storage bin. An enclosed conveyor system transports the ore from the ore bin to the mill bench via the 1690 Portal. After ore removal, the excavated section of the mine is filled with a paste backfill discussed below.

The milling process consists of grinding the ore to a fine particle size and recovering gold through gravity separation. The remaining gold and sulfide minerals are concentrated by a flotation and cyanide-vat leaching process to recover the gold. The cyanide process is operated in a closed-circuit system within the mill. Free cyanide and metalocyanide complexes in the thickening tailings are oxidized in a cyanide detoxification tank using a sulfur dioxide and copper sulfate air process. The residual detoxified tailings material is combined with cement and flotation tailings and placed in the underground mine as cemented "paste" backfill. The remaining flotation tailings are dewatered to approximately 15% moisture and trucked to the Dry Stack Tailings Facility (DSTF) storage area. Recycled process water, mine drainage water, and surface runoff are used to meet process water requirements. Fresh water is only utilized if these sources are inadequate.

Non-mineralized development rock produced during the exploration, development and operation of the mine is stored in various locations on the mine site and used in site construction activities. Mineralized material is either placed underground or encapsulated in the DSTF.

Mineral exploration activities at Pogo include geologic mapping, soil and rock sampling, geophysical surveys and wire-line diamond core drilling. Access to remote exploration sites is conducted via helicopter. Access to near mine exploration sites is by diesel pickup trucks on constructed exploration roads. All diamond drilling is conducted using a combination of fresh water from Alaska Department of Natural Resources (ADNR) approved Temporary Water Use Authorization sites and bio-degradable, non-toxic drilling additives. Completed road-based drill holes are grouted from top to termination depth, while completed helicopter drill holes are closed off by setting a plug and cementing the top 50 feet of the hole up to ground level. When a drill site is completed, refuse is removed from the site. Sumps are pumped and reclaimed. Brush or woody material is placed on the pads to encourage natural re-vegetation and protect the sites from erosion.

1.5 General Location and Site Maps

A copy of the general location map and site maps for this facility are included in Attachment D & Appendix D.

Figure 1 Vicinity Map

Figure 2 South Access Road

Figure 3 Middle Access Road

Figure 4 North Access Road

Figure 5 SWPPP Inspection Overview

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- Figure 6 1525 Portal Area & Lower Camp
- Figure 7 Airstrip
- Figure 8 Mill Bench and Permanent Camp Area
- Figure 9 Recycled Tailings Pond and Dry Stack Tailings Facility
- Figure 10 Exploration Roads – South Pogo
- Figure 11 Exploration Roads – East Deep
- Figure 12 Exploration Roads – Goodpastor

- The 1525 Portal Area encompasses approximately 50 acres of disturbances (Attachment D and Appendix D – Figure 6)
- The Airstrip encompasses approximately 30 acres of disturbances (Attachment D and Appendix D – Figure 7)
- The Liese Creek Area encompasses approximately 120 acres of disturbances (Attachment D and Appendix D – Figures 8-9); and
- The South Pogo Ridge, East Deep, and Goodpastor surface exploration roads encompass approximately 18 acres of disturbances (Attachment D and Appendix D – Figures 10-12).

Each site map identifies, as relevant:

- Location and extent of significant structures and impervious surfaces
- Direction of storm water flow
- Locations of existing structural BMPs
- Locations of receiving surface water bodies
- Locations storm water conveyances including diversion ditch, culverts, flumes, and sediment basins
- Locations of potential pollutant sources (refer to Table 3-1)
- Locations of activities exposed to precipitation (fueling stations, vehicle and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage or disposal of wastes; and liquid storage tanks, processing and storage areas, access roads, the location of transfer of in-bulk substances and machinery)
- Locations of storm water outfalls and an approximate outline of the area draining to each outfall
 - Outfall covered under the MSGP is the Outfall SW21
 - Outfalls covered under the APDES Permit are Outfall 001 and Outfall 002
- Locations and source of non-storm water discharges; and
- The location and source of any run-on to the facility (from adjacent property) containing significant quantities of pollutants of concern to the facility. No such facilities exist at present due to Pogo’s isolated location.

1.5.1 Pogo Mine Access Road

The Pogo Access Road is heavily trafficked by employees and contractors all year on a daily basis. In addition, the ADNR leases areas near the access road for logging. Logging companies are exempt from SWPPP requirements under the silvicultural exemption under the Clean Water Action Section 404(f). However, the exemption only applies to their area of operations. When the logging trucks and operators are on the Pogo Access Road, they must adhere to the Pogo SWPPP. In order to ensure this requirement, logging drivers must stop at the Pogo guard shack, where they will be notified of the SWPPP and BMPs and they will sign a 1-page compliance form adhering to the BMPs. (Attachment O and Appendix I).

During road construction activities, contractors must provide a copy of their Construction General Permit (CGP) SWPPP.

Maps showing the approximate locations of logging operations are shown in Attachment D and Appendix D - Figures 2-4.

Pogo-lead inspections of the road will occur on a quarterly basis (i.e., once each permit quarter), or in some instances more frequently, as needed. Under Sector G of the MSGP (11.G.4.14 Inspection of Clearing, Grading, and Excavation Activities), inspections during road construction are required at least once every 7 calendar days OR within 24 hours of the end of a measurable storm event.

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1.5.2 Bridges

Several bridges exist along the Pogo Access Road, including the one crossing the Goodpaster River. Inspecting the BMPs near bridges is a requirement for the Routine (Quarterly) Inspections. BMP maintenance of bridges is required to protect the waters of the U.S. from stormwater pollutants.

1.5.3 1525 Portal Area and Pogo Creek

Storm water in the 1525 Portal Area is collected by ditches and berms and directed to a natural vegetative filter area just to the east of the construction camp. Storm waters flow, then drain, to a settling basin and are released through a culvert at Outfall SW21. Pogo Creek empties into the settling basin and exits through the culvert at Outfall SW21. Outfall SW21 is the only discrete conveyance of storm water off the property subject to the MSGP.

The Pogo Mine treats sewage water at the Sewage Treatment Facility and the treated water discharges to Pogo Creek at Outfall002, in accordance with the APDES Permit. Refer to Attachment D and Appendix D – Figure 6.

1.5.4 Airstrip Area

Storm water in the Airstrip Area is controlled by berms and directing flows from the roads and airstrip into local infiltration basins. There are no storm water discharges from the Airstrip Area. Refer to Attachment D and Appendix D – Figure 7.

1.5.5 Portal Area and Pogo Creek

In the Liese Creek Area, site runoff that may potentially be exposed to mine tailings or mineralized rock (contact water) is either collected directly in the Recycle Tailings Pond (RTP) reservoir or in the lined Storm Water Collection Pond (SCP), which serves as a settling pond. Runoff from the drystack tailings area is collected directly in the RTP and does not interact with non-contact water. All runoff from the haul road from the mill to the drystack, the camp bench, the mill bench, the ore stockpile, and the 1875 portal area is directed through storm drains to the SCP. The water from the SCP is then pumped to the RTP for storage. The capacity of the SCP is estimated at 1.4 million gallons.

Water from the RTP is either used in the Mill processes or treated and discharged through Outfall 001 under the APDES Permit.

Storm water in the headwaters of the Liese Creek area is gathered in an extensive diversion ditch constructed above the DSTF. This ditch diverts surface flows around the tailings facilities and back into Liese Creek below the RTP. Shotcrete lining of portions of the diversion ditch, rock armor, corrugated metal pipe flumes, and settling basins are incorporated into the diversion ditch to minimize erosion and sedimentation. This ditch is designed to only catch up-slope non-contact drainage into Liese Creek and divert it below the RTP catchment for reintroduction into the natural stream bed above the 1875 Portal. Where Liese Creek enters the Goodpaster floodplain, it disperses into a natural well-vegetated wetland.

All non-contact storm water from the lower part of the Mill Bench in the Liese Creek area is collected in ditches along Road 1 and directed into the storm water basin in Material Site A. Water released from Material Site A is diffused through the large alluvial fill embankment of Road 6 before it reenters groundwater in the wetlands below Liese Creek. Attachment D and Appendix D – Figures 8-9.

1.5.6 Surface Exploration Road Areas

Surface exploration roads are built and maintained by a drilling contractor who is overseen by the Pogo Exploration Superintendent. Storm water BMPs used on exploration roads include culverts, Driscoll pipe, ditches and water bars. Culverts and Driscoll pipe are used to manage water stream flows and storm water around roads and berms.

On steep gradients, ditches and water bars are maintained, added or moved as necessary, to control the flow of storm water and prevent sediment erosion. Gravel berms are created along all roads, and brush berms are also constructed as needed. During the reclamation of exploration roads, stockpiled growth media and woody debris are spread over disturbed areas to prevent erosion. Roads are inspected by the Pogo Environmental Department on at least a quarterly basis during summer. Maps of surface exploration roads showing many of the BMP's in use can be seen in Attachment D and Appendix D – Figures 10-12.

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2. SECTION 2: POTENTIAL POLLUTANT SOURCES

In this section, we describe areas at the facility where industrial materials or activities are exposed to storm water or from which allowable non-storm water discharges are released.

2.1 Industrial Activity and Associated Pollutants

The areas at Pogo Mine where industrial materials or activities exposed to storm water and the associated potential pollutants are summarized in Table 2-1.

TABLE 2-1: Potential Pollutant Sources

Location	Sources	Activities Conducted	Pollutants
1525 Portal Area	Burn Pit Construction Camp Dormitory Containment Building Diesel-Fired Generators Diesel-Fired Heaters Diesel-Fired Heavy Equipment Environmental Field Office Exploration Camp Dormitory Fueling Equipment Fueling Station Core Processing Facility Helicopters Lay Down/Staging Area Mine Portal 1525 Mine Water Treatment Plant #3 (APDES Outfall 001) Mineralized Pad Discharges from Sewage Treatment Plant (APDES Outfall 002) Potable Water Plant Roads Tailings Paste Backfill Trucks Waste Rock Storage Overburden & Top Soil Piles	Burning of Clean Wood & Cardboard Cooking Employee Housing Equipment Storage Fuel Dispensing Fuel Storage Helicopter Staging & Fueling Mine Access Mine Water Treatment Mining Power Generation Process Mine Samples Processing Geological Samples Receiving Freight Sample Preparation Staging Equipment Supply Potable Water to Camp Treatment of Raw Sewage Vehicle Traffic & Parking Waste Incineration Waste Storage Waste Rock, Overburden & Top Soil Storage	Ash / Soot Cardboard Clean Wood Contaminated Soil Diesel Fuel Ethylene Glycol Food Waste Gasoline Groundwater Samples Hydraulic Oil Hydrochloric Acid Jet A Fuel Mine Water Samples Mineralized Material Nitric Acid Non-Mineralized Material Office Waste Oil Absorbents Ore Samples Propylene Glycol Raw Sewage Sediment/Dust Sulfuric Acid Surface Water Samples Universal Waste Used Batteries & Used Oil Treated and Untreated Mine Water
Airstrip	Aircraft Diesel-Fired Generators Diesel-Fired Heavy Equipment Fueling Equipment Lay Down/Staging Area APDES Discharges from Outfall 001 Off-River Treatment Works Roads Trucks	Aircraft Landing & Take Off Fuel Dispensing Power Generation Receiving Freight Staging Equipment Vehicle Traffic & Parking Rock Crushing	Diesel Fuel Ethylene/Propylene Glycol Hydraulic Oil Treated Mine Water Non-Mineralized Material Sediment/Dust

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Location	Sources	Activities Conducted	Pollutants
Liese Creek Area	Assay Lab Cut-Off Ditches Diesel-Fired Generators Diesel-Fired Heavy Equipment Diesel-Fired Pickups Dry-Stack Tailings Facility Electrical Transformer Lay Down/Staging Area Material Site A Mill Bench Office Complex Mill and Paste Plant Mine Portal 1690 Mine Portal 1875 Mine Portal 2150 Mine Water Permanent Camp Dormitory Potable Water Plant Recycle Tailings Pond (RTP) Roads Sewage Treatment Piping Tailings Paste Backfill Truck Maintenance Shop Vehicle Parking Warehouse Waste Rock Storage	Convey Ore to Mill Cooking Cyanide Vat Leaching Employee Housing Flotation Fuel Dispensing Fuel Storage Gravity Separation Mine Access Mine Ventilation Mining Ore Processing Power Generation Processing Ore Receive/Distribute Supplies Receiving Freight Recycle Mine Water & Onsite Runoff Staging Equipment Supply Potable Water to Camp Tire Repairs Vehicle Maintenance & Repairs Vehicle Traffic & Parking	Arsenic-Bearing Minerals Cooking Oils Diesel Fuel Dry Stack Tailings Ethylene Glycol Food Waste Groundwater Samples Hydraulic Oil Hydrochloric Acid Mine Water Samples Mineral Oil Mineralized Material Nitric Acid Non-Mineralized Material Ore Samples Propylene Glycol Raw Sewage Sediment/Dust Sodium Cyanide Sodium Hypochlorite Sulfide-Bearing Minerals Sulfur Dioxide Sulfuric Acid Untreated Mine Water
Surface Exploration Roads	Roads Surface Drill Rigs Diesel-Fired Generators Diesel-Fired Heaters Diesel-Fired Heavy Equipment Fueling Equipment Trucks	Vehicle Traffic & Parking Exploration Core Drilling Fuel Dispensing Power Generation Road & Drill Pad Preparation Heat Generation (Spring / Fall)	Diesel Fuel Ethylene/Propylene Glycol Hydraulic Oil Drilling Fluids
Pogo Access Road	Logging Operations Diesel-Fired Heavy Equipment Fueling Equipment Trucks	Logging Clearing Grubbing Road Maintenance	Diesel Fuel Ethylene/Propylene Glycol Hydraulic Oil

With the exception of the Pogo Access Road, the potential pollutants are diverted to the outfalls listed in Section 1.5.

2.2 Spills and Leaks

(Reference MSGP Section 5.2.4.3)

Potential spills and leaks could occur in the areas identified in Table 2-1 when the listed activities are conducted. Spills or leaks that occur within the areas of the mill bench, camp bench and other areas that drain to the SCP will be contained. The locations of these areas are shown on the site maps contained in Attachment D and Appendix D.

Reportable spills and leaks that occurred during the three (3) year period prior to the effective date of the current MSGP permit (April 1, 2015) and going forward until the MSGP expires (until March 31, 2020, or until a

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Notice of Termination [NOT] is filed) are located in Attachment E and Appendix E. Spill History Table, Attachment E and Appendix E, is updated annually.

2.3 Non-Storm Water Discharges Documentation

(Reference MSGP Section 5.2.4.4)

The following allowable non-storm water discharges from the mine site may occur:

- Discharges from fire fighting activities;
- Fire hydrant flushings (activity on an annual basis);
- Foundation or footing drains where flows are not contaminated with process materials such as solvents;
- Potable water including water line flushings;
- Routine external building wash down which does not use detergents;
- Uncontaminated air conditioning or compressor condensate; and
- Uncontaminated groundwater, spring water, or potable water.

These allowable non-storm water discharges will be conducted with proper controls in place to minimize sediment runoff into streams.

Discharges that are otherwise authorized under APDES Permit #AK0053341 are not considered allowable "non-storm water discharges" under the MSGP.

2.4 Salt Storage

(Reference MSGP Section 5.2.4.5)

Pogo does not use salt for deicing purposes and, therefore, has no salt storage on the property.

2.5 Sampling Data Summary

(Reference MSGP Section 5.2.4.6)

The current storm water sampling location for the MSGP is Outfall SW21 (refer to Attachment D and Appendix D – Figure 6). Storm water sampling data collected from Outfall SW21 for the MSGP required Benchmark Monitoring analytes are summarized and located in Attachment F.

3. SECTION 3: STORM WATER CONTROL MEASURES AND BPMS

This section identifies procedures for selection and implementation of storm water control measures and BMPs appropriate for Pogo (per MSGP Sections 4.2 and 5.2.5.1 and APDES Permit Section 2.2.4.2). Pogo follows Alaska Storm Water Guide, December 2011, (Attachment G) for design, construction/installation, inspection, and maintenance of storm water control measures and BMPs.

The storm water control measures and BMPs selected are also consistent with the objectives and the general guidance contained in Guidance Manual for Developing Best Management Practices (EPA 833-B-93-004, October 1993) and Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices (EPA 832-R-92-006) or subsequent revisions of these guidance documents. The location of the storm water control measures and BMPs, which are approximate, were determined in the field and are generally shown on the site maps Attachment D and Appendix D.

3.1 Program for Maintenance, Inspection, and Repair of Site BMPs

Table 3-1 outlines the program utilized to inspect the selected storm water control measures and BMPs.

TABLE 3-1: Program for Maintenance, Inspection, and Repair of Site BMPs

BMPs	Inspection Frequency	When to Conduct Maintenance and Repairs
TEMPORARY SOIL STABILIZATION BMPs		
Geotextiles Earth Dikes & Lined Ditches Slope Drains	Quarterly Inspection	<ul style="list-style-type: none"> ▪ Inspect for torn or exposed geotextile and repair ▪ Inspect for proper installation and function. ▪ Inspect for down-gradient sediment load

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BMPs	Inspection Frequency	When to Conduct Maintenance and Repairs
TEMPORARY SEDIMENT CONTROL BMPs		
Silt Fence Check Dam Brush Barrier	Quarterly Inspection	<ul style="list-style-type: none"> ▪ Inspect for proper installation and function. ▪ Inspect for down-gradient sediment load
WIND EROSION CONTROL BMPs		
Wind Erosion Controls	Quarterly Inspection	<ul style="list-style-type: none"> ▪ Inspect for proper installation and function.
TRACKING CONTROL BMPs		
Stabilized Site Entrance Stabilized Roads	Quarterly Inspection	<ul style="list-style-type: none"> ▪ Inspect for proper installation and function. ▪ Check for overloaded sediment trap and initiate clean-out, if necessary. ▪ Inspect for sediment tracking.
OPERATION MANAGEMENT BMPs		
Water Conservation Practices Discharge Reporting Vehicle/Equipment Cleaning Fueling Maintenance/Serviceing	Quarterly Inspection	<ul style="list-style-type: none"> ▪ Monitor water usage and communicate conservation practices. ▪ Inspect for proper installation and function. ▪ Inspect for unauthorized discharges and correct. ▪ Ensure proper catch basins are used when cleaning or fueling equipment. ▪ Inspect and maintain sufficient sorbents on hand. ▪ Inspect for leaks/drips or contamination.

3.2 BMP Installation

BMPs installed during the construction phase of the mine project are being utilized during the operation of the mine and new BMPs are installed as needed. A number of BMPs are in general use around the mine site. Roads have earth berms to control run off, and are sloped to control the flow of water and sediments to settling ponds and infiltration galleries. Drainage swales and brush berms also exist along many of the roads. Cat tracking may be used in areas around the DSTF, and temporary sediment traps may be installed anywhere on site as needed. Water bars are used and moved, generally along exploration roads, as conditions requires. Watering roads, and the occasional use of calcium chloride, are used for wind-erosion (dust) control.

Other existing BMP controls utilized at various locations on the mine site are shown in Attachment D and Appendix D including:

- Culverts, Driscoll Pipe, flumes, and ditches;
- Stilling basins, sedimentation ponds, and settling basins;

More specific BMPs are used to address specific areas:

- Filter Fabric Inlet Protection; Figure 9 (Inlet 2 & 3 on Diversion Ditch)
- HDPE piping; Figure 9 (South End Diversion Ditch)
- Rock armor (riprap); Figure 7 (Inlet Pond at ORTW)
- Shotcrete; Figures 8 and 9 (Diversion Ditch and 2150 Portal)
- Storm water collection and treatment; Figure 8 (1690 Seepage Collection Pond)

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3.3 Sector Specific Controls and BMP Plan Components

(Reference MSGP Section 4.2 and Section 11.G, and APDES Permit Section 2.2.4)

In addition to the non-numeric technology based effluent limits in the MSGP (i.e. the use of pollution prevention procedures and BMPs instead of numerical effluent limits to control sediments and pollution in storm water), Pogo Mine is required under the MSGP to meet applicable sector-specific requirements associated with the primary industrial activity (and any co-located industrial activities). Based on the primary Standard Industrial Code (1041) for "Gold Ores," Pogo Mine is subject to certain sector specific requirements in MSGP Section 11.G for Metal Mining. Industrial activities that are otherwise covered under the APDES Permit are not subject to sector-specific requirements. Sector-specific requirements applicable to Pogo Mine are included in the controls and components identified in this Section.

3.4 Minimize Exposure

(Reference MSGP Sections 4.2.1 and 11.G.4)

Where practicable, industrial materials and activities will be protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff.

3.5 Good Housekeeping

(Reference MSGP Sections 4.2.2, 11.G.4.7, and 11.G.5.2 and APDES Permit Section 2.2.4.1)

Good housekeeping practices are designed to maintain a clean and orderly work environment. A clean work environment reduces the possibility of accidental releases caused by mishandling of chemicals or equipment and should reduce safety hazards to facility personnel. Proper operation and maintenance practices ensure that processes and equipment are working correctly and minimize the potential for pollutants to enter the environment due to storm water runoff. The following good housekeeping measures, as appropriate, have been identified for Pogo Mine:

- Personnel employ proper storage techniques
- For hazardous materials, dedicated indoor and outdoor storage areas and/or secondary containment such as a berm or dike with an impervious surface
- Drums and containers clearly marked to identify contents
- Adequate aisle space provided to facilitate material transfer and easy access for inspections
- Containers are closed except when being filled or emptied
- Containers of hazardous materials are labeled
- Hazardous waste is stored in containers that will not corrode, rupture or be damaged in any way by the waste
- Incompatible types of waste are never stored in the same container
- Used fluids are promptly transferred to a proper container
- Spent batteries are stored in an appropriate container until the batteries are picked up for recycling, and the number of used batteries in storage is kept to a manageable quantity. Cracked batteries are stored in a non-leaking secondary container
- Conserving vegetation
- Dust control via watering roads

Personnel maintain an inventory of materials used or stored at the facility and Safety Data Sheets (SDS's) for these materials are available on-site. Garbage, waste materials, and used parts are regularly picked up and given proper disposal.

Vehicle and equipment maintenance activities occur in indoor areas or utilize containment designed to capture spills, drips or other potential discharges during such activities. Vehicle washing takes place in an enclosed wash bay equipped with an oil/water separator.

Exposed areas of the facility shall be kept in a clean, orderly manner where there is potential to contribute pollutants to storm water discharges, such as the areas around trash containers, storage areas, and loading docks. These work areas are cleaned up at the end of each shift. Garbage and waste materials are disposed in the appropriate dumpsters and/or connex containers following the cleanup of each work area. Under the Spill Prevention, Control, and Countermeasure (SPCC) Plan, inspections are conducted to determine the

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condition of drums, tanks, and containers and identify leaks or spills. All identified action items will be documented and addressed in a timely fashion.

Solid waste material is collected and stored in appropriate containers and either burned on-site or hauled off-site for proper disposal. Any hazardous waste materials will be disposed of in the manner specified by local, state or Federal regulations.

Sanitary waste is treated in the Sewage Treatment Plant and discharged through Outfall 002 in accordance with the APDES Permit.

3.6 Maintenance

(Reference MSGP Section 4.2.3, 5.2.6.1, 11.G.4.7.2, and 11.G.5.3; and APDES Permit Section 2.2.4.1.10)

Pogo Mine has a preventative maintenance and inspection program that is performed across several departments. Pogo's Environmental group performs regular inspections and oversees maintenance of storm water management devices, e.g., catch basins, berms, and secondary containments. The Mill and Maintenance departments inspect and maintain storage tanks, slurry, pressure lines, fuels, lubricants, and hydraulic fluid respective to their work areas. Facility equipment and systems are inspected, tested, maintained through formal preventative maintenance programs, as well as repaired, to avoid breakdowns or failures that might result in discharges of pollutants to surface waters. When needed, all required maintenance and repairs are completed indoors and in a timely manner.

3.7 Spill Prevention and Response

(Reference MSGP Section 4.2.4, and 5.2.6.1; APDES Permit Section 2.2.3.3 and 2.2.4.32; and Plan of Operations Approval No. F20189500 pg 6)

Employees utilize the procedures outlined in the site's SPCC Plan and the Plan of Operations to minimize spills and leaks at the mine site. These procedures and plans are available to all employees that may cause or detect a spill or leak. Fuels and hydrocarbons are stored in secondary containment and quarterly inspections are conducted to prevent releases to the environment. Any identified maintenance items are addressed promptly. All employees receive training related to spill response, spill reporting, fuel handling procedures, the locations and use of spill kits and emergency response equipment, emergency response procedures, and proper waste management procedures. Spill response equipment is stored at strategic locations throughout the mine site to allow quick response to spills that might occur. Measures used for cleaning up hazardous material spills or leaks are conducted in accordance with all applicable regulations including the Resource Conservation and Recovery Act (RCRA).

3.8 Erosion and Sediment Controls

(Reference MSGP Sections 4.2.5 and 11.G.4)

Structural practices minimize sediment and erosion transport and include the use of earth dikes, drainage swales, sediment traps, sediment basins and water bars. Stabilization practices control erosion and sediment transport and include seeding, mulching, geotextiles, vegetative buffer strips, protection of trees, and preservation of mature vegetation.

Some areas on the mine site that have the potential for significant soil erosion due to topography, land disturbance (construction), or other factors, have controls that include both structural and stabilization practices.

3.8.1 Erosion Control

Soil stabilization, also referred to as erosion control, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Soil stabilization BMPs protect the soil surface by covering and/or binding soil particles. During mine site operations, the following practices for effective temporary and final soil stabilization are utilized:

- Preserve existing vegetation when feasible;
- Apply soil stabilization (erosion control) to remaining active and non-active areas as necessary to maintain effectiveness; and
- Control erosion in concentrated flow paths by Cat track walking (where applicable to soil/topography conditions, generally at the DSTF), applying erosion control blankets, rock armor/riprap, shotcrete, check dams, erosion control seeding, and/or lining drainage swales as required.

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Sufficient soil stabilization materials are maintained on-site and utilized to control soil erosion in conformance with the MSGP and APDES Permit requirements and in accordance with this Plan. The following BMPs are used on site for soil stabilization:

- Reseeding;
- Cross-tracking;
- Armament (including rock/gravel placement, jute matting, straw bales and straw wattles; and
- Installing silt fence.

Erosion features which form in areas that have been re-contoured and covered with topsoil must be stabilized if they affect the long-term stability of the reclaimed area or may result in additional erosion or sedimentation. Actions to stabilize erosion features shall be completed to verify that rills and gullies do not persist. If chronic or long-term erosion features are identified, then remediation of the site drainage that is contributing to the formation of the rills and gullies shall be completed and this Plan will be updated.

3.8.2 Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected soil stabilization (erosion control) measures and reduce sediment discharges from the mine site. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. In the 1525 Portal area, the vegetative filter area and settling pond provide sediment control. In the Liese Creek area, the stilling basin and the settling basin in Material Site A, and the graded filter in the road embankment provide sediment control.

Sediment control materials will be maintained on-site throughout the duration of operations to allow implementation of temporary sediment controls in the event of predicted rain and for rapid response to failures or emergencies in conformance with other requirements and as described in this plan. Implementation of sediment controls will occur for active areas and non-active areas before the onset of predicted rain, as needed.

Implementation and locations of sediment control BMPs are shown on the Site Maps in Attachment D and Appendix D.

3.9 Management of Runoff

(References MSGP Sections 4.2.6 and 11.G.5.4)

The BMPs that are used to manage runoff in order to divert, infiltrate, re-use, or otherwise reduce pollutants in storm water discharges from the site include channels or gutters, culverts, vegetative filters, the diversion ditch, settling basins, flumes, stilling basins, Material Site A storm basin, and road sloping and berms.

3.10 Security

(Reference APDES Permit Section 2.2.4.1.11)

Pogo Mine is attended 24 hours per day, year-round. The remote camp is 38 air miles from the closest town. Public access to the camp has been limited by the ADNR (reference: Teck-Pogo's letter from the Division of Mining and Water Management, dated June 7, 1999) and access is monitored by a manned gate at the entrance of the all-season access road. Therefore, security fences and locks are not necessary to prevent damage by trespassers. Some fuel storage tanks are enclosed in buildings, which provides additional security. Starter controls on oil pumps are kept in the off position when not operating, and are only accessible by authorized personnel.

3.11 Employee Training

(Reference MSGP Section 4.2.9, 5.2.6.1, 11.G.5.1, and 11.G.6.5; and APDES Permit Section 2.2.4.1.12)

The employee training program for storm water at Pogo includes spill response, good housekeeping, material management practices, waste management, and the components and goals of the SWPPP and BMP Plan. This training is given annually to all employees that work in areas where industrial materials or activities are exposed to storm water covered under the MSGP and discharges under the APDES Permit and for employees (i.e., inspectors and maintenance people) that are responsible for implementing activities identified in the Plan.

Pogo Mine provides annual training on BMPs and storm water control measures to employees, as applicable to their specific site responsibilities. This training facilitates proper operation and maintenance of equipment

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and knowledge of spill procedures and protocols. Open discussions are encouraged to further enhance the program. Specific topics addressed in the training include the following:

- Discussion regarding applicable pollution control laws, rules, and regulations
- Components and goals of the BMPs and storm water control measures
- Preventive maintenance and inspections
- Potential sources of storm water pollution and source control methods
- Good housekeeping
- Material Management Practices
- Waste Management Practices including proper handling of waste water treatment sludge, solid waste and hazardous waste; and
- The SPCC and other Safe Work Procedures to minimize spills and leaks at the mine site.

Training records are maintained by the Pogo Environmental Department and are available in Attachment N and Appendix H.

3.12 Non-Storm Water Discharges

(Reference MSGP Section 4.2.10 and 11.G.4.6)

Prohibited non-storm water discharges, as defined by the MSGP, include:

- Wastewater from concrete washout, unless managed by an appropriate control measure
- Wastewater from washout and cleanout of stucco, paint, form-release oils, curing compounds, and other construction materials
- Fuels, oils, and other pollutants used in vehicle and equipment operations and maintenance; and
- Soaps and solvents used in vehicle and equipment washing.

There is currently a concrete washout station at the airstrip and its wastewater is controlled by a BMP.

As discussed in Section 3.5 and 3.6, maintenance activities occur indoors or utilize containment designed to capture spills, drips, or other potential discharges during such activities. Also, vehicle washing takes place in an enclosed wash bay equipped with an oil/water separator.

In addition to the prohibited non-storm water discharges listed above, non-storm water discharges from the facilities water treatment plants are not covered under the MSGP. However, these non-storm water discharges are covered under the APDES Permit. The water from the RTP Reservoir is treated and discharged through Outfall-001, in accordance with the APDES Permit. Sanitary waste is treated in the Sewage Treatment Plant and discharged through Outfall-002, in accordance with the APDES Permit.

3.13 Waste, Garbage, and Floatable Debris

(Reference MSGP Section 4.2.11 and 11.G.5.2)

Exposed areas will be kept free of waste, garbage, and floatable debris to prevent them from being discharged into receiving waters or such materials will be intercepted before they are discharged. Solid waste is managed by a series of dumpsters with regular transportation off site to local landfills. An on-site burn pit manages packaging wastes and constructions debris. The facility ensures proper management of waste in accordance with the *Pogo Mine Waste Management Plan* May 24, 2018 (No 018DB0001), which is incorporated herein by reference.

3.14 Dust Generation and Vehicle Tracking of Industrial Materials

(Reference MSGP Section 4.2.12 and 11.G.5.4)

This section describes controls and procedures used at the site to minimize the generation of dust and off-site tracking of raw, final, and waste materials.

3.14.1 Wind Erosion Control

Dust on camp access roads and haulage roads is controlled by watering as frequently as necessary to suppress wind erosion. Water is pumped from the lower camp Pond (across from the Gravel Pond) and sprayed where needed on mine site roads. When deemed necessary, calcium chloride is used on roads that have the heaviest traffic, most often along the mill and permanent camp bench.

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3.14.2 Tracking Control

Sediment tracking from the mine site onto private or public roads is reduced at the Pogo Main Gate by soil stabilization provided by a graveled road.

3.15 Specific BMP Requirements under APDES Permit

(Reference APDES Permit Section 2.2)

The following BMPs have been implemented to meet the objective of the BMP Plan consistent with the APDES Permit:

- Solids, sludges, or other pollutants removed in the course of treatment or control of water and wastewaters are disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters. See Waste Management Permit No. 2018DB0001 Pogo Mine
- Compliance with applicable regulations promulgated by RCRA including 40 CFR Part 262 applicable to hazardous waste generators; and
- The facility ensures proper management of materials in accordance with the SPCC Plan of 2018 which is incorporated herein by reference.

4. SECTION 4: SCHEDULES AND PROCEDURES FOR MONITORING

This section describes the procedures for conducting the four types of analytical monitoring specified by the MSGP where applicable for Pogo Mine. The four types of analytical monitoring defined by the MSGP are (1) Benchmark Monitoring; (2) Effluent Limitations Guidelines Monitoring; (3) Impaired Waters Monitoring; and (4) Other Monitoring as Required by the ADEC.

However, the Pogo Mine is only required to conduct these monitoring activities if specified in their sector-specific section of the MSGP, if they discharge to a Clean Water Act 303(d) listed water body, or if required by separate permit requirements.

- Pogo Mine is required to conduct Benchmark Monitoring (MSGP Section 11.G.8) for discharges from waste rock and overburden piles for the parameters listed in Table 11.G.8-2 of the MSGP.
- Pogo Mine is not required to conduct Effluent Limitations Guidelines Monitoring under Sector G of the MSGP.
- Pogo Mine does not discharge to an Impaired Water, as identified by a State or the EPA pursuant to Section 303(d) of the Clean Water Act. Impaired Waters Monitoring is not required for this facility.
- Pogo Mine is required by the ADEC to conduct additional monitoring under their APDES Permit (Attachment C and Appendix C).

4.1 Sector-Specific Benchmark Monitoring

Analytic monitoring must be performed on any discrete conveyances of storm water from rock and overburden piles once within the first year of permit coverage for the parameters listed in Table 4-1, Waste Rock and Overburden Piles Benchmark Monitoring, below (including use of Table 4-2, below, if hardness dependent). Any parameters in Table 4-1 that are measured above the benchmark value, based on the initial sampling event, must be monitored twice annually, thereafter. If the benchmark sampling dictates that twice annual samples must be taken for certain parameters, those samples must be collected once between January 1 and June 30, and once between July 1 and December 31.

TABLE 4-1: Waste Rock and Overburden Piles Benchmark Monitoring Values

Parameter	Benchmark Value	Units
Total Suspended Solids	100	milligrams per litre (mg/L)
Turbidity	See Note 1	
pH	6.5-8.5	standard units
Hardness (as CaCO ₃)	NA	NA
Antimony (Total)	0.64	mg/L
Arsenic (Total)	0.15	mg/L

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Parameter	Benchmark Value	Units
Beryllium (Total)	0.13	mg/L
Cadmium (Total)	Hardness Dependent ²	
Copper (Total)	Hardness Dependent ²	
Iron (Total)	1.0	mg/L
Lead (Total)	Hardness Dependent ²	
Mercury (Total)	0.0014	mg/L
Nickel (Total)	Hardness Dependent ²	
Selenium (Total)	0.005	mg/L
Silver (Total)	Hardness Dependent ²	
Zinc (Total)	Hardness Dependent ²	

Notes:

1. Turbidity in fresh water may not exceed 5 nephelometric turbidity units (NTU) above natural conditions when the natural turbidity is 50 NTU or less, and may not have more than a 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU.
2. The fresh-water benchmark values of some metals are dependent on water hardness of the receiving water. Reference Table 4-2 for Benchmark Values for water hardness dependent metals.
3. Water hardness collected from Liese Creek.

TABLE 4-2: Hardness-Dependent Benchmark Values

Water Hardness Range (mg/L)	Cadmium (mg/L)	Copper (mg/L)	Lead (mg/L)	Nickel (mg/L)	Silver (mg/L)	Zinc (mg/L)
0 – 25	0.0005	0.0038	0.014	0.15	0.0007	0.04
25 – 50	0.0008	0.0056	0.023	0.20	0.0007	0.05
50 – 75	0.0013	0.0090	0.045	0.32	0.0017	0.08
75 – 100	0.0018	0.0123	0.069	0.42	0.0030	0.11
100 – 125	0.0023	0.0156	0.095	0.52	0.0046	0.13
125 – 150	0.0029	0.0189	0.122	0.61	0.0065	0.16
150 – 175	0.0034	0.0221	0.151	0.71	0.0087	0.18
175 – 200	0.0039	0.0253	0.182	0.80	0.0112	0.20
200 – 225	0.0045	0.0285	0.213	0.89	0.0138	0.23
225 – 250	0.0050	0.0316	0.246	0.98	0.0168	0.25
250+	0.0053	0.0332	0.262	1.02	0.0183	0.26

Analytic monitoring for these benchmark analytes are collected from Outfall SW21, which is the discrete conveyance of storm water from rock and overburden piles for the lower camp Portal 1525. The results of storm water Benchmark Monitoring must be submitted within 30 days of the final laboratory report. Results are submitted the ADEC using the Discharge Monitoring Report (DMR) Form provided in Attachment L.

Pogo performed Benchmark Monitoring in 2016 and 2017 with samples collected during discharge events in the second and third quarters of each year (Attachment F). Results were submitted to ADEC via the DMR Form as certified mail. No benchmark values were exceeded during the monitoring period. Benchmark Monitoring will be completed for the current MSGP.

4.2 Additional Monitoring Required by APDES

Water from the RTP is either used in the Mill process or treated and discharged through Outfall-001. Discharges from the sewage treatment plant are discharged through Outfall-002. The discharge of these treated waters are authorized discharges under the APDES Permit. Monitoring requirements for these outfalls are defined in the APDES Permit (Attachment C).

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5. SECTION 5: INSPECTIONS

This section describes the procedures for conducting the three types of inspections specified by the MSGP. The three types of inspections defined by the MSGP are:

1. Routine (Quarterly) Facility Inspections
2. Quarterly Visual Assessment of Storm Water Discharges; and
3. a Comprehensive (Annual) Site Inspection.

In addition, the Pogo Mine conducts Daily Visual Inspections for Outfalls-001 and -002 in accordance with the APDES Permit. Also, the Pogo Mine may conduct additional inspections during heavy rainfall events, to assess if their BMPs are effective and/or require maintenance or modifications.

5.1 Daily Visual Inspections of APDES Outfall-001 and Outfall-002

(Reference APDES Permit Section 1.2.4)

Pogo performs daily visual inspections of Outfalls-001 and -002 for:

- Floating solids;
- Visible foam in other than trace amounts; and
- Oily wastes that produce a sheen on the surface of the receiving water.

Records of these daily inspections are maintained by Water Operations and are available through the Mill Department or Environmental.

5.2 Routine Facility Inspections

(Reference MSPG Section 6.1)

Routine Facility Inspections take place quarterly between April and October. They begin each year as the spring thaw commences, usually April, and continue until frozen conditions prevent water from flowing, generally in October. The Routine Facility Inspection Form (Attachment I) is used during these inspections and includes comprehensive maps of storm water management components. These Inspection Forms are compliant with the MSGP Section 6.1.2 requirements for documentation. INX is an inspection tracking database used by the Pogo Environmental Department. Hardcopy forms can be printed (and findings entered into INX afterwards) or a field tablet used to enter inspection data. Corrective actions are described, the person responsible for completing corrective actions is identified, and a due date is established. INX will not allow an inspection to be completed and closed out without confirmation that all corrective actions were completed.

The Environmental Team is responsible for ensuring that the Routine Facility Inspections are conducted on a quarterly basis from April to October of each year. The Routine Facility Inspections will focus on the following areas:

- Areas where industrial material or activities are exposed to storm water
- Areas identified in the SWPPP as potential pollutant sources
- Areas where spills and leaks have occurred in the past 3 years
- Discharge points; and
- Control measures used to comply with this permit.

At least one of the Routine Facility Inspections must be conducted during a period when a storm water discharge is occurring. The Routine Facility Inspections must examine the following:

- Industrial materials, residue, or trash that may have or could come into contact with storm water
- Leaks or spills from industrial equipment, drums, tanks, or other containers
- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site
- Tracking or blowing of raw, final, or waste materials from area of no exposure to exposed areas; and
- Control measures needing replacement, maintenance, or repair.

During an inspection occurring during a stormwater discharge, control measures implemented to comply with effluent limits must be observed to ensure they are functioning correctly. Discharge points must also be observed during this inspection. If such discharge locations are inaccessible, nearby downstream locations must be inspected.

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5.3 Heavy Rainfall Event Inspections

Pogo has determined that a storm of 0.5 inches of rain in a 24-hour period has the potential to impact storm water controls and BMPs. A storm event of this magnitude will constitute an inspection using the Storm Event Facility Inspection form (Attachment I). These inspections will be conducted once per measurable storm event resulting from a discharge from the facility at SW21. Storm events will be differentiated from preceding storm events by at least three days of no discharge from SW21.

If a series of successive heavy rains continue to trigger further inspections, inspections may be modified and areas showing the highest impact will be inspected more frequently and areas showing little or no impact will be inspected less frequently and the modification noted on the Storm Event Facility Inspection form (Attachment I).

5.4 Quarterly Visual Assessment of Storm Water Discharges

(Reference MSGP Section 6.2)

Storm water in the 1525 Portal Area is collected by ditches and berms and directed to a natural vegetative filter area just to the east of the construction camp. Storm water and Pogo Creek are directed to a settling basin which is released through a culvert at Outfall SW21. Outfall SW21 is the only discrete conveyance of storm water off the Pogo Mine property (refer to Attachment D and Appendix D, Figure 6).

The MSGP requires visual assessment of surface water discharges requirements are summarized below in Table 5-1.

TABLE 5-1: Visual Assessment Program Summary

Outfall	Sample Type	Frequency ¹	Parameters	Timing
SW21	Grab	Quarterly and/or when a discharge from a measurable storm event occurs	Colour, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other indicators of storm water pollution	Representative storm event resulting in a discharge from SW21

¹ Quarterly sample are not collected when frozen conditions exist. Samples are collected between the spring thaw and fall freeze up.

Outfall SW21 discharge is extremely variable. Dry years can occur with no discharge; heavy precipitation can cause discharge to flow continuously throughout the summer. During summer conditions, visual exams are performed when any measurable storm event resulting in discharge occurs, and when the storm event that meets the following criteria:

- Under the most recent MSGP, a storm event no longer has a specified magnitude (i.e. greater than 1 inch of precipitation), only that it results in a discharge from the facility
- A qualifying storm event must follow a previous measurable storm event (that resulted in a discharge from the facility) by at least 72 hours; and
- The 72-hour storm interval is waived when the preceding measurable storm did not yield a measurable discharge, or if it can be documented that less than a 72-hour interval is representative for local storm events during the sampling period.

Storm event data is gathered and input on the *SWPPP Visual Assessment Monitoring Report* (Attachment J).

- Date and duration (in hours) of the storm event(s) sampled
- Rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff
- Duration between the storm event samples and the end of the previous measurable storm event; and
- An estimation of the total volume (in gallons) of the discharge samples.

The visual examination sampling procedure is as follows:

- Visual examinations of discharge samples will be conducted within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) after runoff from a measurable rain event or snowmelt begins flowing from the mine site resulting in a discharge at Outfall SW21. An automatic sampler is installed at Outfall SW21 to collect a water sample as discharge begins (the automatic sampler is reset when discharge stops flowing from Outfall SW21)
- Fill a sample container (minimum 100 milliliters) from the automatic sampler

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- To ensure consistent observations, attempt to ensure that the same sample container is used throughout the sampling program
- Conduct the examination in a well-lighted area. Examine the sample and complete the relevant portions of the SWPPP Visual Exam Monitoring Report
- All samples collected must be representative of the monitored activity
- Document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The report must include the examination date and time, examination personnel, the nature of the discharge (i.e. runoff or snowmelt), visual quality of the storm water discharge and probable sources of any observed storm water contamination. Monitoring reports must be signed by the responsible person (the SWPPP Point of Contact) and include a certification statement.

The completed SWPPP Visual Assessment of Storm Water Discharges Form is signed by the Environmental Manager, scanned to the electronic filing system, and the hardcopy retained in the original SWPPP in Attachment J. If no qualifying storm event resulted in discharge from the facility during a monitoring quarter, including winter/frozen conditions when no visual exams are performed, this is also documented on the quarterly Visual Assessment of Storm Water Discharges Form. The visual exam sampling results do not need to be submitted to a regulatory agency. See Attachment K, Industrial Stormwater Monitoring and Sampling Guide, March 2009 for guidance on storm water sampling.

The automatic sampler is used for the monthly visual assessment. When the automatic sampler stops flowing, it is reset to wait for the next rain event. During years of heavy precipitation when Outfall SW21 flows continuously, the reset also allows for Pogo Mine to confirm that pollutants are not entering the discharge stream. The culvert, sediment ponds, the Core Processing Facility, and the fuel island, as well as the general area around SW21, are inspected for conformance with Pogo's housekeeping, spill, and waste disposal procedures.

5.5 Annual Comprehensive Site Inspection

(Reference MSGP Section 6.3, 8.4, and 9.2; APDES Permit Section 2.4.3)

The SPPT / BMP Committee will conduct a comprehensive site evaluation on an annual basis which is generally performed in the summer allowing maximum access to different areas of the mine and the storm water management system. The comprehensive site evaluation will include:

- A review of this Plan
- A comprehensive site inspection of the storm water management system using the SWPPP inspection form-*Storm Water Annual Comprehensive Site Evaluation*
- Documentation and tracking any corrective actions, and
- Recommended revisions to meet the requirements of the MSGP and APDES Permit.

5.5.1 Annual BMP Plan Review

To satisfy the BMP Plan requirements under the APDES Permit, the SPPT/BMP Committee will review annually the BMP Plan to ensure it fulfills the requirements set forth in the APDES Permit. Any operational or maintenance changes will be updated. Specifically note the following:

- Pollution Prevention Team – Is the team roster current?
- Records – Are copies of all compliance evaluations, inspections, and visual examinations of sampling available included with the Plan?
- BMPs – Was the implementation schedule for BMPs met?
- Description of potential pollutant sources – Is the list of potential sources that may reasonably be expected to add significant amounts of pollutants current?
- Location of BMPs – Verify that all major BMPs are noted on the map and in the correct location.
- Other industrial activity – Are other industrial activities being undertaken on the site that have not been identified?
- BMP Plan revision - Identify needed revisions to the BMP Plan such as potential pollutant sources and pollution prevention measures and controls. Complete revisions to the BMP Plan within 14 days of inspection. Include the revision date and a brief description of the revision(s).

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- BMP Plan implementation – Implement those changes identified in the BMP Plan within 12 weeks after the comprehensive evaluation. Complete a site inspection to record the date of implementation and update the plan maps.

5.5.2 BMP Plan Annual Certification

(Reference APDES Permit Section 2.4.3)

A statement that certifies that the review has been completed and that the BMP Plan fulfills the requirements set forth in the APDES Permit will be prepared, signed and dated by each member of the SPPT/BMP Committee. This statement will be submitted to ADEC on or before January 31st of each year of operation under the APDES Permit.

5.5.3 Annual Comprehensive Site Evaluation

(Reference MSGP Section 6.3.2)

A comprehensive annual review (usually in June) of the facility is required that covers all areas of the facility affected by the requirements in the MSGP. The Storm Water Annual Comprehensive Site Evaluation form. Refer to Section 5.2 for details regarding the main components of the Routine Facility Inspection and Storm Water Annual Comprehensive Site Evaluation.

5.5.4 SWPPP Annual Report

(Reference MSGP Section 9.2)

An annual report is submitted by February 15 of the following year. The report may be submitted electronically through the ADEC Online Application System. Or the MSGP Annual Report form (Attachment L) may be mailed to ADEC. Any corrective actions initiated and completed during the reporting year are included in the annual report. If all corrective actions have not been completed by the time the annual report is submitted a summary of the status of the correction action must be included.

5.5.5 Corrective Actions

(Reference MSGP Section 8)

If any of the following conditions occur, the Pogo Mine must review and revise the selection, design, installation, and implementation of their control measures to ensure that the condition is eliminated and will not be repeated in the future:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this or another APDES permit) occurs at the permittee's facility
- A discharge violates a numeric effluent limit
- The Pogo Mine becomes aware, or ADEC determines, that the Pogo Mine's control measures are not stringent enough for the discharge to meet a water quality standard in the receiving water
- An inspection or evaluation of the Pogo Mine by an ADEC or EPA official determines that modifications to the control measures are necessary to meet the non-numerical effluent limits in this permit; or
- The Pogo Mine finds in their Routine Facility Inspection, Quarterly Visual Assessment, or Storm Water Annual Comprehensive Site Evaluation that their control measures are not being properly operated and maintained.

The Pogo Mine will document their discovery of any of the conditions listed above within 24 hours of the finding. Subsequently, within 14 days of such discovery, the Pogo Mine must document any corrective action(s) to be taken to eliminate or further investigate the deficiency, or document why no corrective action is needed. If the Pogo Mine determines that changes are necessary, modifications to their control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but are schedules considered reasonable for documenting the findings and for making repairs/improvements. The schedules are included in this SWPPP to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

Corrective actions will document the above information in Questions 3-5, and 7-11 of the Corrective Actions sections of the Annual Reporting Form (Attachment L). Pogo Mine is required to submit this documentation in an annual MSGP DMR report as required by Section 9.2 of the MSPG.

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6. SECTION 6: SWPPP AND BMP PLAN MODIFICATIONS

This plan is a "living" document and is required to be modified and updated as necessary, in response to corrective actions. If the Plan needs to be modified in response to a corrective action (Section 5.5.5 of this Plan), then the certification statement must be re-signed in accordance with the 2015 MSGP Appendix A, Subsection 1.12. For any modification to the plan, the SWPPP Amendment Log (Appendix M) will be logged with a description of the modification, the name of the person making it, and the date and signature of that person.

6.1 BMP Plan Modifications

(Reference APDES Permit Section 2.2.7)

This Plan shall be amended:

- Whenever there is a change in the facility or in the operation of the facility which materially increases the generation of pollutants or their release or potential release to surface waters; or
- Whenever the Plan it is found to be ineffective in achieving the general objective of preventing and minimizing the generation and the potential for the release of pollutants from the facility to the waters of the United States and/or the specific requirements of the APDES Permit.

Changes to the BMP Plan shall be consistent with the objects and specific requirements of the APDES Permit. All changes in the BMP Plan shall be reported to ADEC with the annual certification required in APDES Permit Section 2.2.5.

6.2 SWPPP Modifications

(Reference MSGP Section 8.1 and 8.2)

This Plan shall be modified, as necessary, in response to a corrective action required under MSGP Section 8.1 or if the conditions under MSGP Section 8.2 are triggered.

The following items will be included in each modification:

- Who requested the amendment
- The location of proposed change
- The reason for change
- The modification and any new control or BMP implemented.

The modifications for this Plan, along with the applicable certifications, are located in the SWPPP Amendment Log in the beginning of this Plan.

6.3 Records

(Reference MSGP Section 1.1)

Records of all monitoring information and copies of all monitoring reports required by the MSGP must be retained for at least five (5) years from the date of the sample, measurement, evaluation, inspection or report. A copy of this Plan must be retained for at least five (5) years after the last modification or amendment is made to the plan.

Records of monitoring information must include:

- Date, exact place, and time of sampling or measurements
- Name(s) of the individual(s) who performed the sampling or measurements
- Date analyses were performed
- Times analyses were initiated
- Initials or name(s) of the individual(s) who performed the analyses
- The analytical techniques or methods used; and
- Results of analyses, including bench sheets, instrument readouts, computer disks or tapes, etc. used to determine these results.

A copy of this Plan (including a copy of the permit language) will be retained at the mine site from the date of permit coverage to the date the permit coverage ceases, or for five years, whichever period is longer.

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TABLE 6-1: Records Retention

Record Description	Record Location/ Retention Responsibility	Minimum Retention Time
Annual BMP Plan Review Certification	Environmental Archives & SWPPP / Environmental Manager	5 years
Notice of Intent & Notice of Termination	Environmental Archives & SWPPP / Environmental Manager	5 years
Pogo Spill History	Environmental Archives & SWPPP / Environmental Manager	5 years
Pogo Mine Spill Log	Environmental Archives / Environmental Manager	5 years
Employee Training Records	Training Database / Human Resources	5 years
Daily Visual Inspections- Water Operations Logs	Mill Archives & Environmental Archives / Mill & Environmental Managers	5 years
Visual Exam Monitoring Report Form	Environmental Archives & SWPPP / Environmental Manager	5 years
Discharge Monitoring Report Form.	Environmental Archives & SWPPP / Environmental Manager	5 years
SWPPP Inspection - Site Wide Stormwater Inspection	INX / Environmental Manager	5 years
MSGP Annual Report	Environmental Archives & SWPPP / Environmental Manager	5 years

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7. SECTION 7: SWPPP CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Jill Ladegard Title: Environmental Manager
Signature: _____ Date: _____

8. ANNUAL BMP PLAN REVIEW CERTIFICATION

By January 31st of each year, the operator shall prepare an Annual Certification of BMP Plan Review stating compliance with the terms and conditions of the Alaska Pollution Discharge Elimination System Permit, Section 2.2.5. Refer to Attachment M and Appendix G, Annual Certification of Compliance Form.

January 31, 2009	Annual Certification of Compliance complete:	1-31-2009
January 31, 2010	Annual Certification of Compliance complete:	1-31-2010
January 31, 2011	Annual Certification of Compliance complete:	1-26-2011
January 31, 2012	Annual Certification of Compliance complete:	1-23-2012
January 31, 2013	Annual Certification of Compliance complete:	1-23-2013
January 31, 2014	Annual Certification of Compliance complete:	1-22-2014
January 31, 2015	Annual Certification of Compliance complete:	1-12-2015
January 31, 2016	Annual Certification of Compliance complete:	1-30-2016
January 31, 2017	Annual Certification of Compliance complete:	1-23-2017
January 31, 2018	Annual Certification of Compliance complete:	1-24-2019
January 31, 2019	Annual Certification of Compliance complete:	1-30-2020
January 31, 2020	Annual Certification of Compliance complete:	_____
January 31, 2021	Annual Certification of Compliance complete:	_____
January 31, 2022	Annual Certification of Compliance complete:	_____

9. REFERENCES

The following documents are made a part of this Plan by reference:

- APDES Permit No. AK0053341 effective July 1, 2017
- 2020 Alaska Storm Water Multi-Sector General Permit for Industrial Facilities
- Pogo Spill Prevention Control and Countermeasure Plan, 2020
- Pogo Waste Management Plan, 2020
- ADEC Alaska Storm Water Guide, December 2011.

10. RELATED DOCUMENTS

Document Name	Document Number
Inspection Logs	PGO-ENV-022-FOR
SWPPP Visual Exam Monitoring Report	PGO-ENV-023-REP
Routine Inspection	INX - InControl
Annual Inspection	INX - InControl
Heavy Rainfall Inspection	INX - InControl

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11. ATTACHMENTS

- Attachment A Copy of the 2020 Multi-Sector General Permit
- Attachment B Copy of the Notice of Intent
- Attachment C Copy of the Pogo Mine APDES Individual Permit AK0053341
- Attachment D Vicinity and Site Maps
 - Figure 1 Vicinity Map
 - Figure 2 South Access Road
 - Figure 3 Middle Access Road
 - Figure 4 North Access Road
 - Figure 5 SWPPP Inspection Overview
 - Figure 6 1525 Portal Area & Lower Camp
 - Figure 7 Airstrip
 - Figure 8 Mill Bench and Permanent Camp Area
 - Figure 9 Recycled Tailings Pond and Dry Stack Tailings Facility
 - Figure 10 Exploration Roads – South Pogo
 - Figure 11 Exploration Roads – East Deep
- Attachment E Spill Log History
- Attachment F Outfall SW21 Sample Data
- Attachment G Alaska Storm Water Guide, December 2011
- Attachment H Discharge Monitoring Report Form
- Attachment I Inspections Forms
- Attachment J SWPPP Visual Assessment Monitoring Report
- Attachment K Industrial Stormwater Monitoring and Sampling Guide, March 2009
- Attachment L MSGP Annual Report Form
- Attachment M Annual Certification of Compliance Forms
- Attachment N Training Rosters
- Attachment O Compliance Form for Logging Companies
- Attachment P 2018 ADEC Correspondence

12. APPENDICES

- Appendix A – Copy of the 2020 Multi-Sector General Permit
- Appendix B – Copy of the Notice of Intent
- Appendix C – Copy of the Pogo Mine APDES Individual Permit AK0053341
- Appendix D – Vicinity and Site Maps
- Appendix E – Spill Log History
- Appendix F - Outfall SW21 Sampling Data
- Appendix G – Annual Certificate of Compliance Forms
- Appendix H – Training Rosters
- Appendix I – Compliance Form for Logging Companies
- Appendix J – 2018 ADEC Correspondence

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12.1 APPENDIX A – 2020 Multi-Sector General Permit

General Permit No: AKR060000



ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM
MULTI-SECTOR GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY (MSGP)

Permit Number: AKR060000 – Final

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

In compliance with the provisions of the Clean Water Act (CWA), 33 U.S.C. §1251 *et seq.*, as amended by the Water Quality Act of 1987, P.L. 100-4, this permit is issued under provisions of Alaska Statutes (AS) 46.03; the Alaska Administrative Code (AAC) as amended; and other applicable State laws and regulations. Operators of storm water discharges associated with industrial activity located in an area identified in Part 1.1 where the Alaska Department of Environmental Conservation (DEC) is the permitting authority are authorized to discharge to waters of the United States in accordance with the eligibility and Notice of Intent (NOI) requirements, effluent limitations, inspection requirements, and other conditions set forth in this permit. This permit is structured as follows:

- General requirements that apply to all facilities are found in Parts 1 through 10, and
- Industry sector-specific requirements are found in Part 11.

The Appendices (A through F) contain additional permit conditions that apply to all operators covered under this permit.

This permit becomes effective on April 1, 2020.

This permit and the authorization to discharge expire at midnight, March 31, 2025.



Signature

February 20, 2020

Date

Gene McCabe

Printed Name

Program Manager

Title

Prepared by:	Nathan Kehoe	Document Status:	Uncontrolled
		Review Date:	11 May 2022
Approved by:	Environmental Manager	Approver's Signature:	Jill Ladegard

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12.2 APPENDIX B – Notice of Intent



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF WATER
Wastewater Discharge Authorization Program

555 Cordova Street
Anchorage, Alaska 99501-2617
Main: 907.269.6285
Fax: 907.334.2415
www.dec.alaska.gov/water/wwdp

August 5, 2015

Company: SMM Pogo LLC
ATTN: Chris Kennedy
PO Box 145
Delta Junction, AK 99737

Facility:
Pogo Mine MSGP
38 Miles NE Delta Junction
Delta Junction, AK 99737

Permit Number: **AKR06AC58**

This email/letter acknowledges that you have submitted a complete Notice of Intent form to be covered under the APDES General Permit for Storm water Discharges for Multi-Sector General Permit Activity (MSGP). The permittee is authorized to discharge storm water under the terms and conditions of this permit seven (7) calendar days after acknowledgment of receipt of the permittee's completed NOI is posted on ADEC's Storm Water Permit Search website

(<http://www.dec.state.ak.us/Applications/Water/WaterPermitSearch/Search.aspx>).

Coverage under this permit begins seven-days from the "Date Issued" on the Water Permit Search website.

As stated above, this letter acknowledges receipt of a complete Notice of Intent. However, it is not an ADEC determination of the validity of the information you provided. Your eligibility for coverage under the Permit is based on the validity of the certification you provided. Your signature on the Notice of Intent certifies that you have read, understood, and are implementing all of the applicable requirements. An important aspect of this certification requires that you correctly determine whether you are eligible for coverage under this permit.

As you know, the Multi-Sector General Permit requires you to have developed and begun implementing a Storm water Pollution Prevention Plan (SWPPP) and outlines important inspection and record keeping requirements. You must also comply with any additional location-specific requirements applicable to your state or tribal area. A copy of the Multi-Sector General Permit must be kept with your SWPPP. An electronic copy of the Permit and additional guidance materials can be viewed and downloaded at <http://www.dec.state.ak.us/water/wnpspc/stormwater/index.htm>.

For tracking purposes, the following number has been assigned to your Notice of Intent Form: **AKR06AC58**

If you have general questions regarding the storm water program or your responsibilities under the Multi-Sector General Permit, please call William Ashton (907)269-6283.

AKR06AC58_MSGPNOIReplyLtr.docx

Prepared by:	Nathan Kehoe	Document Status:	Uncontrolled
Approved by:	Environmental Manager	Review Date:	11 May 2022
		Approver's Signature:	Jill Ladegard

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Permit #: _____
For Agency Use



Notice of Intent (NOI) For Storm Water Discharges Associated With Industrial Activity Under the APDES Multi-Sector General Permit

Submission of this completed Notice of Intent (NOI) constitutes notice that the operator identified in Section I of this form requests authorization to discharge pollutants to waters of the United States from the facility or site identified in Section III under Alaska's APDES Multi-Sector General Permit (MSGP) for industrial storm water. Submission of this NOI constitutes your notice to DEC that the facility identified in Section III of this form meets the eligibility conditions of Part 1.1 of the MSGP. Please read and make sure you comply with all eligibility requirements, including the requirement to prepare a storm water pollution prevention plan. Refer to the instructions at the end of this form to complete your NOI.

Section I. Operator Information			
Organization:		Contact Person:	
Sumitomo Metal Mining Pogo LLC		Keri DePalma, Environmental Manager	
Mailing Address:	Street (PO Box):		
	P.O. Box 145		
	City:	State:	Zip:
	Delta Junction	AK	99737
Phone:	Fax (optional):	Email:	
907-895-2879	907-895-2866	keri.depalma@smpmogo.com	
Section II. Billing Contact Information			
Organization:		Contact Person:	
Sumitomo Metal Mining Pogo LLC		Chris Kennedy, General Manager	
Mailing Address:	Street (PO Box):		
	City:		
	State:	Zip:	
	Phone:	Fax (optional):	Email:
<input checked="" type="checkbox"/> Check here if same as Operator Information	907-895-2834	907-895-2866	chris.kennedy@smpmogo.com
Section III. Facility Information			
Facility Name: Pogo Mine			
Have storm water discharges from your site been covered previously under an APDES or NPDES Permit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
a. 1. If Yes, provide the Tracking Number if you have coverage under MSGP 2008 or the APDES permit number if you had coverage under a DEC individual permit.		MSGP 2008 + APDES IP	
2. Have you paid a Multi-Sector General Permit (MSGP) authorization fee for this calendar year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
b. If No, was your facility in operation and discharging storm water prior to September 29, 2013? <input type="checkbox"/> Yes <input type="checkbox"/> No			
c. If No to "b", did your facility commence discharging after September 29, 2013 and before the effective date of this permit <input type="checkbox"/> Yes <input type="checkbox"/> No			
Location Address:	Street:		
	38 Miles NE Delta Junction		
	City:	State:	Zip:
	Delta Junction	AK	99737
Latitude:	Longitude:	Determined By:	
66.4469 ° N	144.9367 ° W	<input checked="" type="checkbox"/> GPS <input type="checkbox"/> USGS Topographic Map <input type="checkbox"/> Other	
If you used a USGS Topographic map, what was the scale?			
Estimated area of industrial activity at your site exposed to storm water: 450 (acres)			Is this a federal facility? <input type="checkbox"/> Yes <input type="checkbox"/> No

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For Agency Use

Permit #: _____

Section IV. Discharge Information									
Does your facility discharge into a Municipal Separate Storm Sewer System (MS4)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
If yes, name of the MS4 Operator: _____									
Receiving Water and Wetlands Information: (if additional space is needed for this question, fill out Attachment 1.)									
a. What is the name(s) of your receiving water(s) that receive storm water directly and/or through a MS4? If your receiving water is impaired, then identify the name of the impaired segment, if applicable, in parenthesis following the receiving water name.	b. Are any of your discharges directly into any segment of an "impaired" water? <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Yes</th> <th style="width: 50%;">No</th> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Yes	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. If you answered yes to question b, then answer the following three questions: i. What pollutant(s) are causing the impairment? ii. Are the pollutant(s) causing the impairment present in your discharge? iii. Has the TMDL been completed for the pollutant(s) causing the impairment?			
Yes	No								
<input type="checkbox"/>	<input checked="" type="checkbox"/>								
Pogo Creek	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Liese Creek	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Good Paster River	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Federal Effluent Limitation Guidelines and Sector-Specific Requirements									
a. Are you requesting permit coverage for any storm water discharges subject to effluent limitation guidelines? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
b. If yes, which effluent limitation guidelines apply to your storm water discharge?									
40 CFR Part/Subpart	Eligible Discharges	Affected MSGP Sector	Check if applicable						
Part 411, Subpart C	Runoff from material storage piles at cement manufacturing facilities.	E	<input type="checkbox"/>						
Part 418, Subpart A	Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished products, by-products, or waste products (SIC 2874).	C	<input type="checkbox"/>						
Part 423	Coal pile runoff at steam electric generating facilities.	O	<input type="checkbox"/>						
Part 429, Subpart I	Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas.	A	<input type="checkbox"/>						
Part 436, Subpart B, C, or D	Mine dewatering discharges at crushed stone mines, construction sand and gravel mines, or industrial sand mines.	J	<input type="checkbox"/>						
Part 443, Subpart A	Runoff from asphalt emulsion facilities.	D	<input type="checkbox"/>						
Part 445, Subparts A & B	Runoff from hazardous waste and non-hazardous waste landfills.	K, L	<input type="checkbox"/>						
Part 449, Subpart A	Runoff from Air Transportation	S	<input type="checkbox"/>						
If you are a Sector S (Air Transportation) facility, do you anticipate using more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis? <input type="checkbox"/> Yes <input type="checkbox"/> No									
Identify the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code that best represents the products produced or services rendered for which your facility is primarily engaged, as defined in MSGP: Primary SIC Code: 1041 or Primary Activity Code: _____									
Identify the applicable sector(s) and subsector(s) of industrial activity, including co-located industrial activity, for which you are requesting permit coverage:									
Sector	Subsector	Sector	Subsector	Sector	Subsector				
G									
Is your site presently inactive or unstaffed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
a. If Yes, is your site expected to be inactive and unstaffed for the entire permit term? <input type="checkbox"/> Yes <input type="checkbox"/> No									
b. If No to "a", then indicate the length of time that you expect your facility to be inactive and unstaffed. _____									
Section V. Storm Water Pollution Prevention Plan (SWPPP) Contact Information									
SWPPP Contact Name: Chris Kennedy, General Manager									
Phone: 907-895-2834 Email: chris.kennedy@smpmogo.com									
URL of SWPPP (if applicable): _____									

Prepared by:	Nathan Kehoe	Document Status:	Uncontrolled
Approved by:	Environmental Manager	Review Date:	11 May 2022
		Approver's Signature:	Jill Ladegard

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STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

For Agency Use

Permit #: _____

Section VI. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Chris Kennedy

General Manager

Printed Name

Title

Chris Kennedy

July 31, 2015

Signature

Date

Sumitomo Metal Mining Pogo LLC

chris.kennedy@smpogo.com

Organization

Email

Section VII. NOI Preparer (Complete if NOI was prepared by someone other than the certifier.)

Keri DePalma

Environmental Manager

Printed Name

Title

Sumitomo Metal Mining Pogo LLC

907-895-2879

Organization

Phone

keri.depalma@smpogo.com

Email

Section VIII. Document Attachments

Documents attached with this application:

Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices (BMPs) Plan,
July 31, 2015

Prepared by:	Nathan Kehoe	Document Status:	Uncontrolled
Approved by:	Environmental Manager	Review Date:	11 May 2022
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Attachment 1. (Fill in as necessary if more space is required for Receiving water and Wetlands Infor

a. What is the name(s) of your receiving water(s) that receive storm water directly and/or through a MS4? If your receiving water is impaired, then identify the name of the impaired segment, if applicable, in parenthesis following the receiving water name.	b. Are any of your discharges directly into any segment of an "impaired" water?		c. If you answered yes to question b, then answer the following three questions: i. What pollutant(s) are causing the impairment?	ii. Are caus imp your
	Yes	No		Yes
Pogo Creek/Goodpaster River	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

MSGP NOI (Mar 2015)

Prepared by:	Nathan Kehoe	Document Status:	Uncontrolled
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12.3 APPENDIX C – Pogo Mine APDES Individual Permit AK0053341



ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM
INDIVIDUAL PERMIT - MINOR MODIFICATION #2
AK0053341- NORTHERN STAR (POGO) LLC
Pogo Mine

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501

In compliance with the provisions of the Clean Water Act (CWA), 33 U.S.C. §1251 *et seq.*, as amended by the Water Quality Act of 1987, P.L. 100-4, this permit is issued under provisions of Alaska Statutes (AS) 46.03; the Alaska Administrative Code (AAC) as amended; and other applicable State laws and regulations. The

NORTHERN STAR (POGO) LLC

is authorized to discharge from the Pogo Mine facility to the following locations:

Outfall	Receiving Water	Latitude	Longitude
001	Goodpaster River	64° 28' 12" N	144° 55' 03" W
002	Goodpaster River	64° 26' 36" N	144° 56' 30" W

In accordance with the discharge point(s) effluent limitations, monitoring requirements, and other conditions set forth herein:

This permit modification and authorization shall become effective **November 1, 2018**

This permit and the authorization to discharge shall expire at midnight, **June 30, 2022**

The permittee shall reapply for a permit reissuance on or before **January 1, 2022**, 180 days before the expiration of this permit if the permittee intends to continue operations and discharge(s) at the facility beyond the term of this permit.

The permittee shall post or maintain a copy of this permit to discharge at the facility and make it available to the public, employees, and subcontractors at the facility.


Signature

November 1, 2018
Date

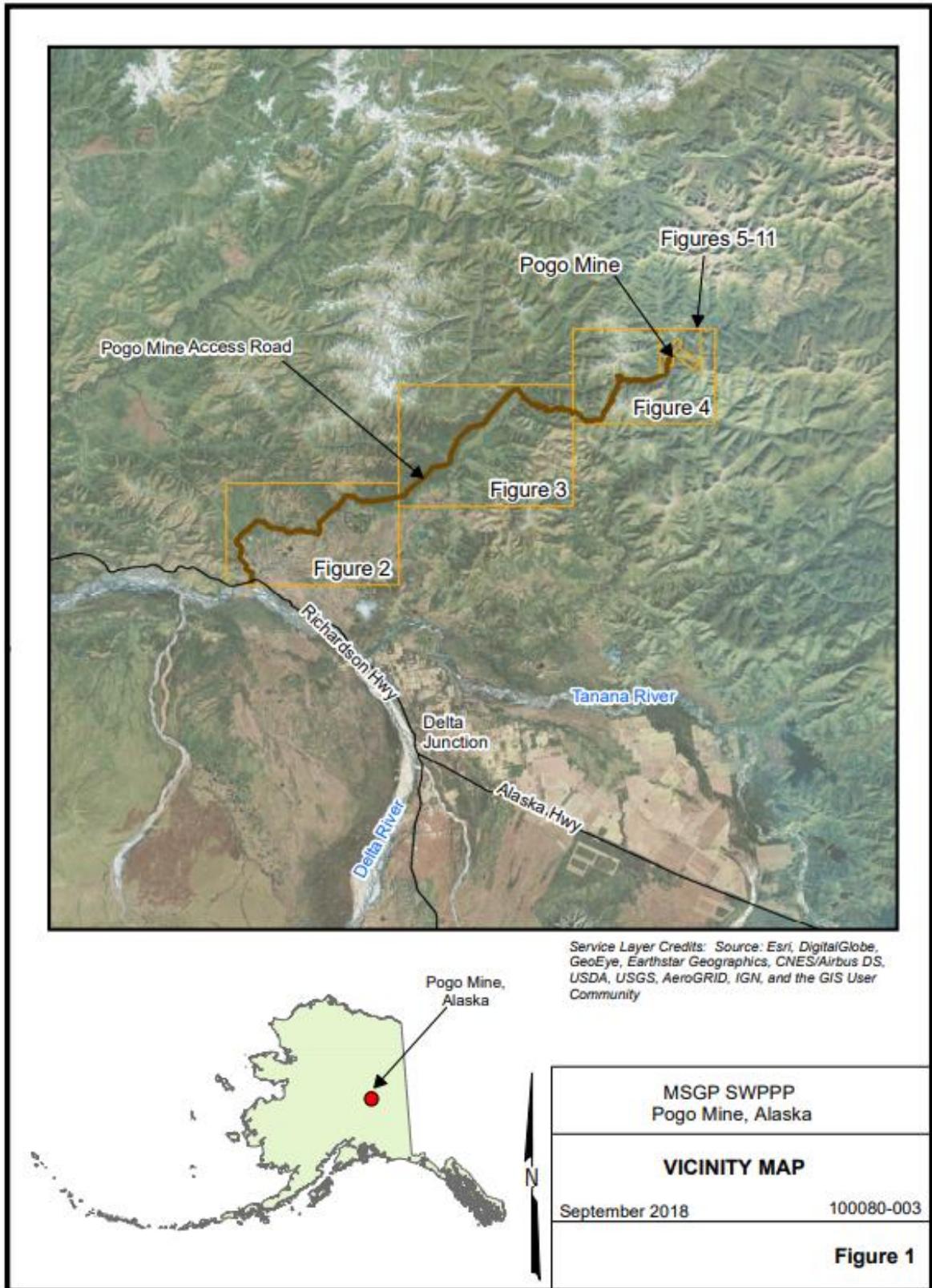
Gene McCabe
Printed Name

Program Manager
Title

Prepared by:	Nathan Kehoe	Document Status:	Uncontrolled
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		Approver's Signature:	Jill Ladegard

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12.4 APPENDIX D – Vicinity and Site Maps



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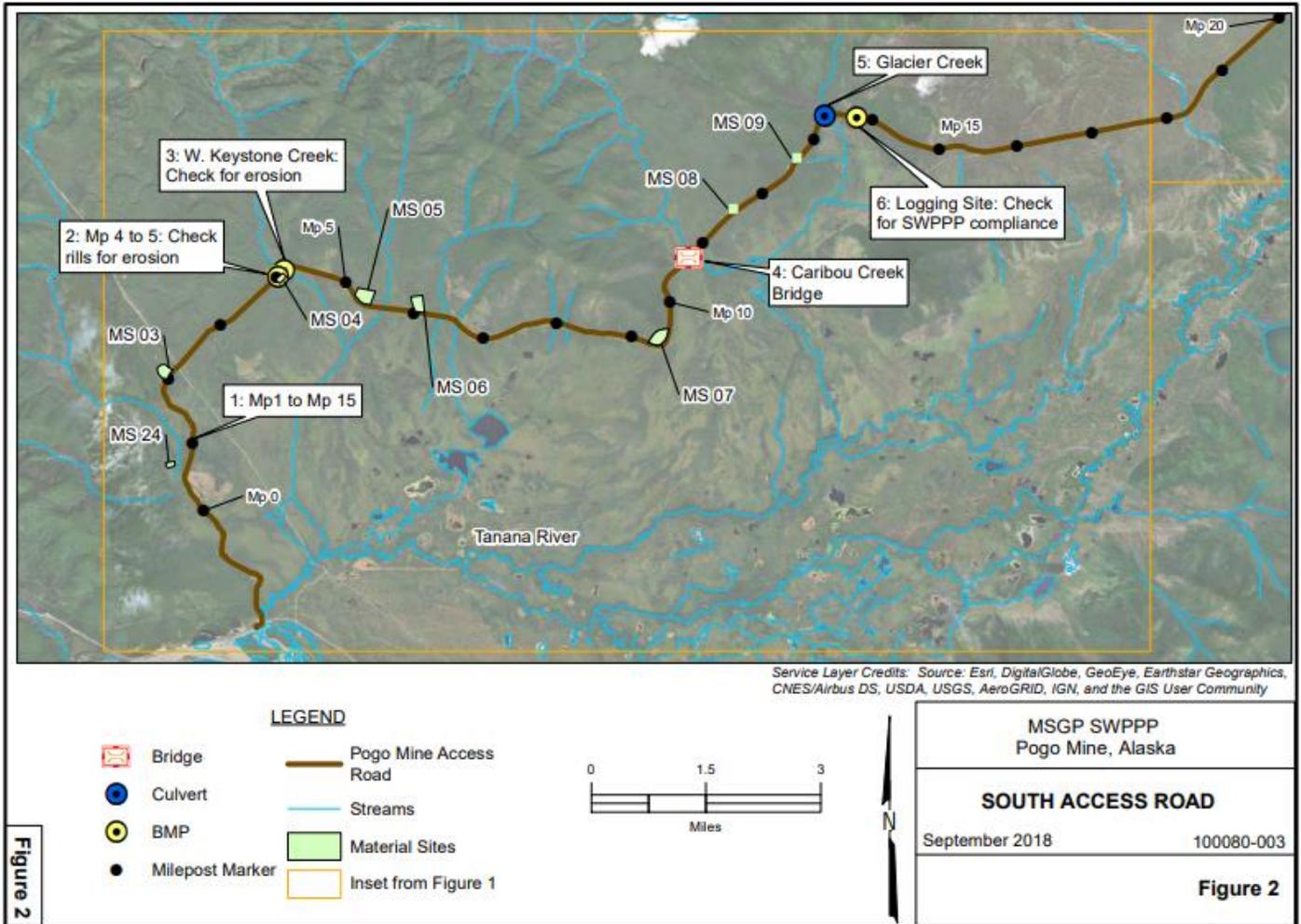
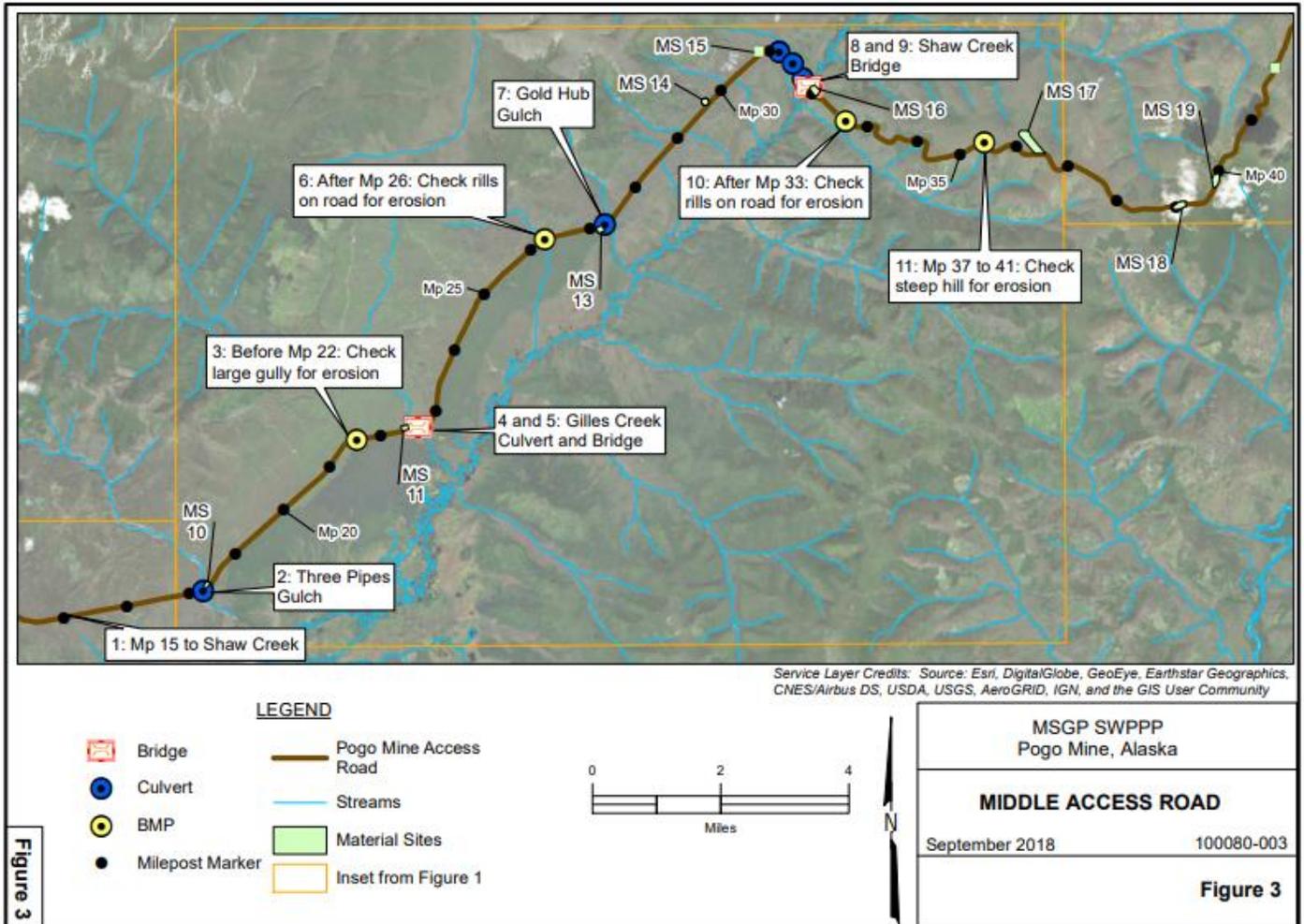


Figure 2

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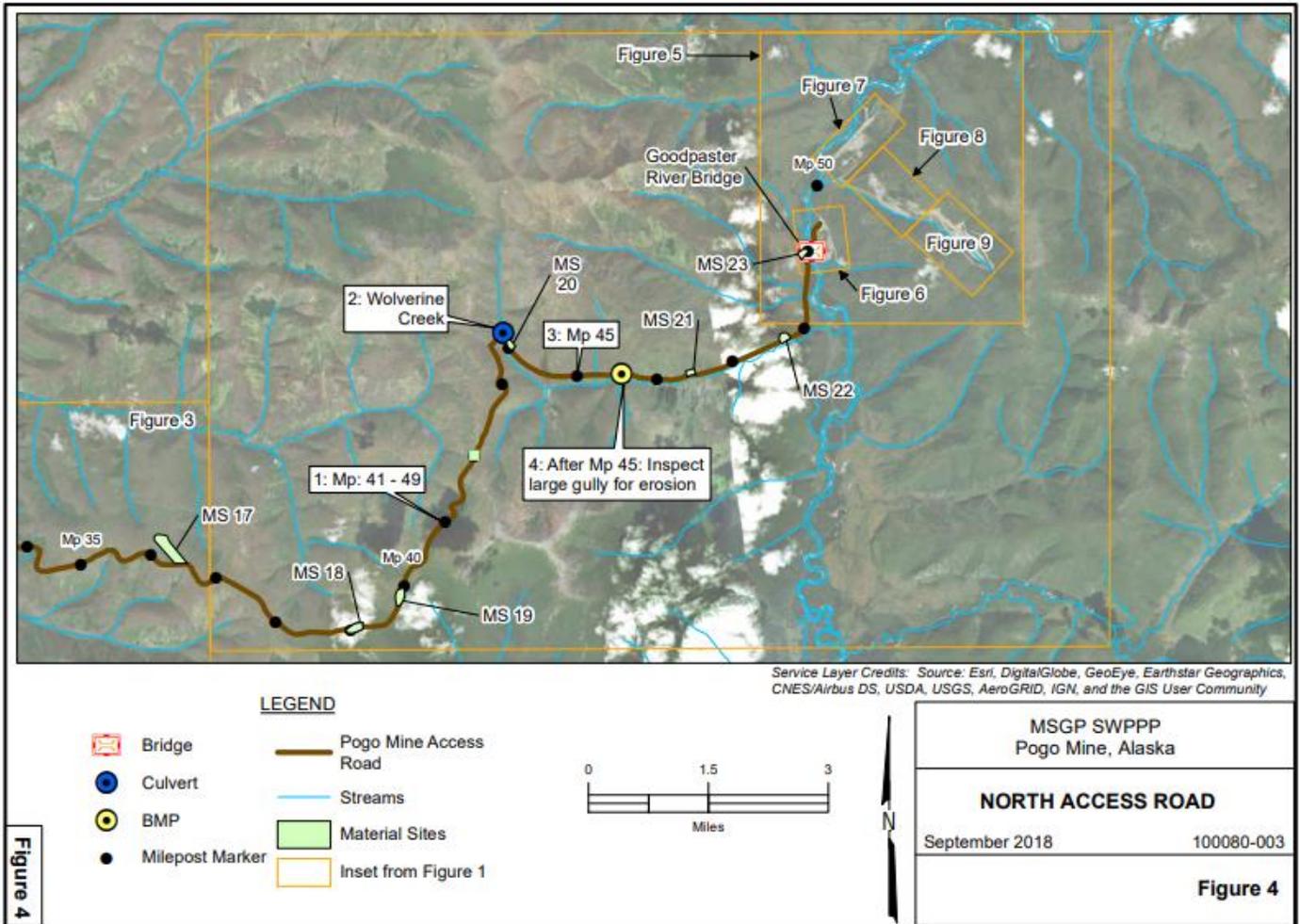
STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN



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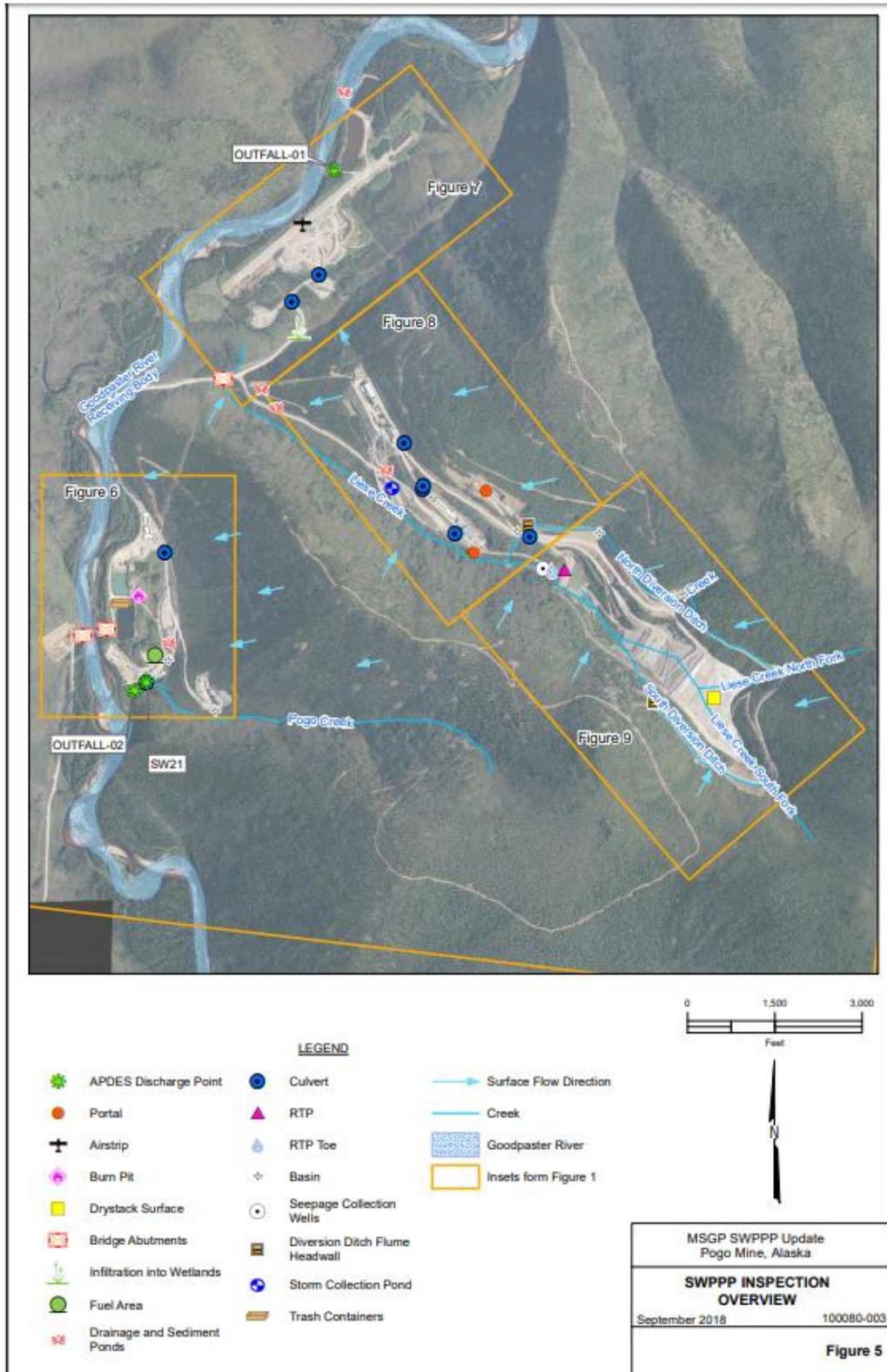
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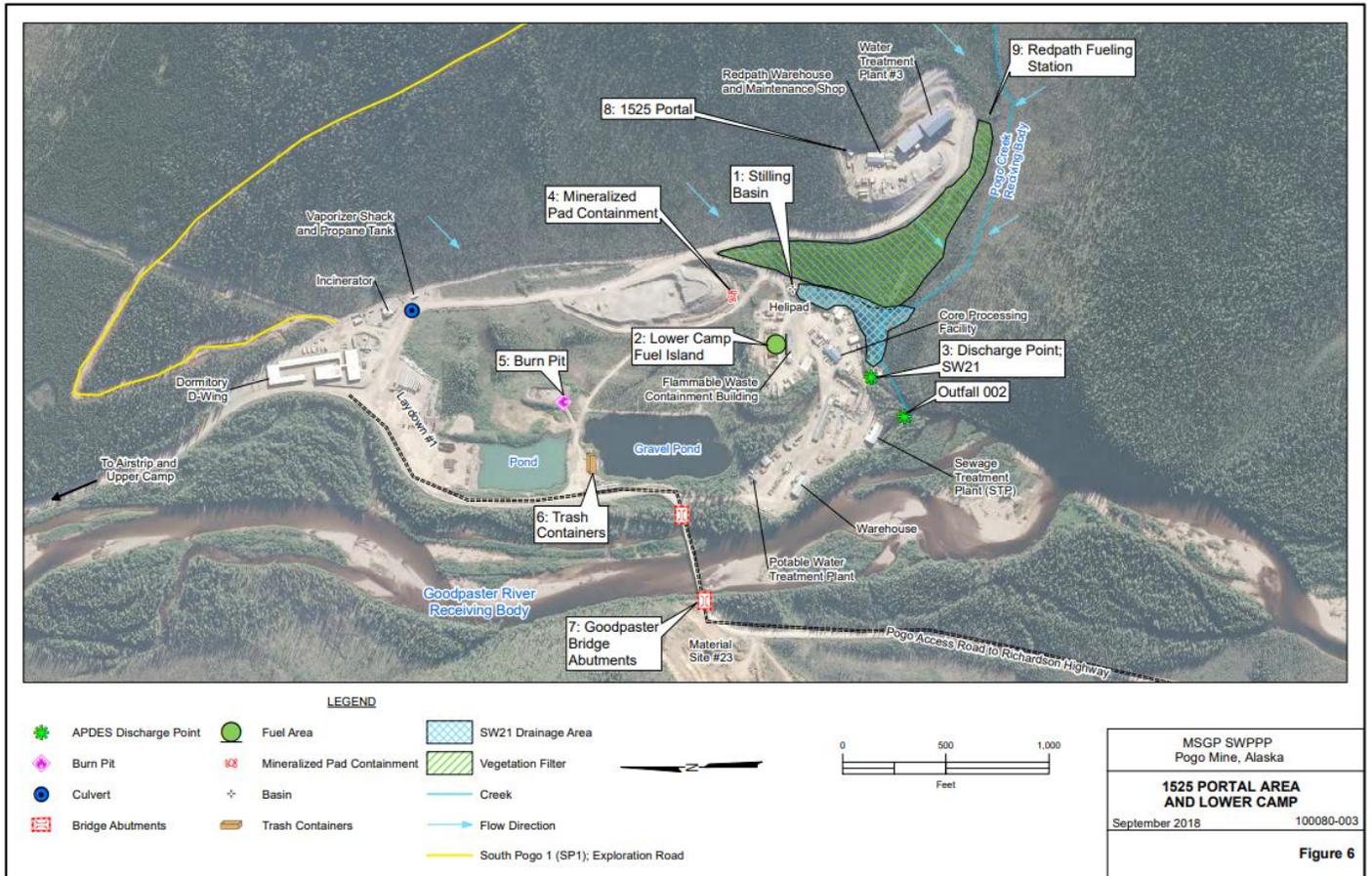
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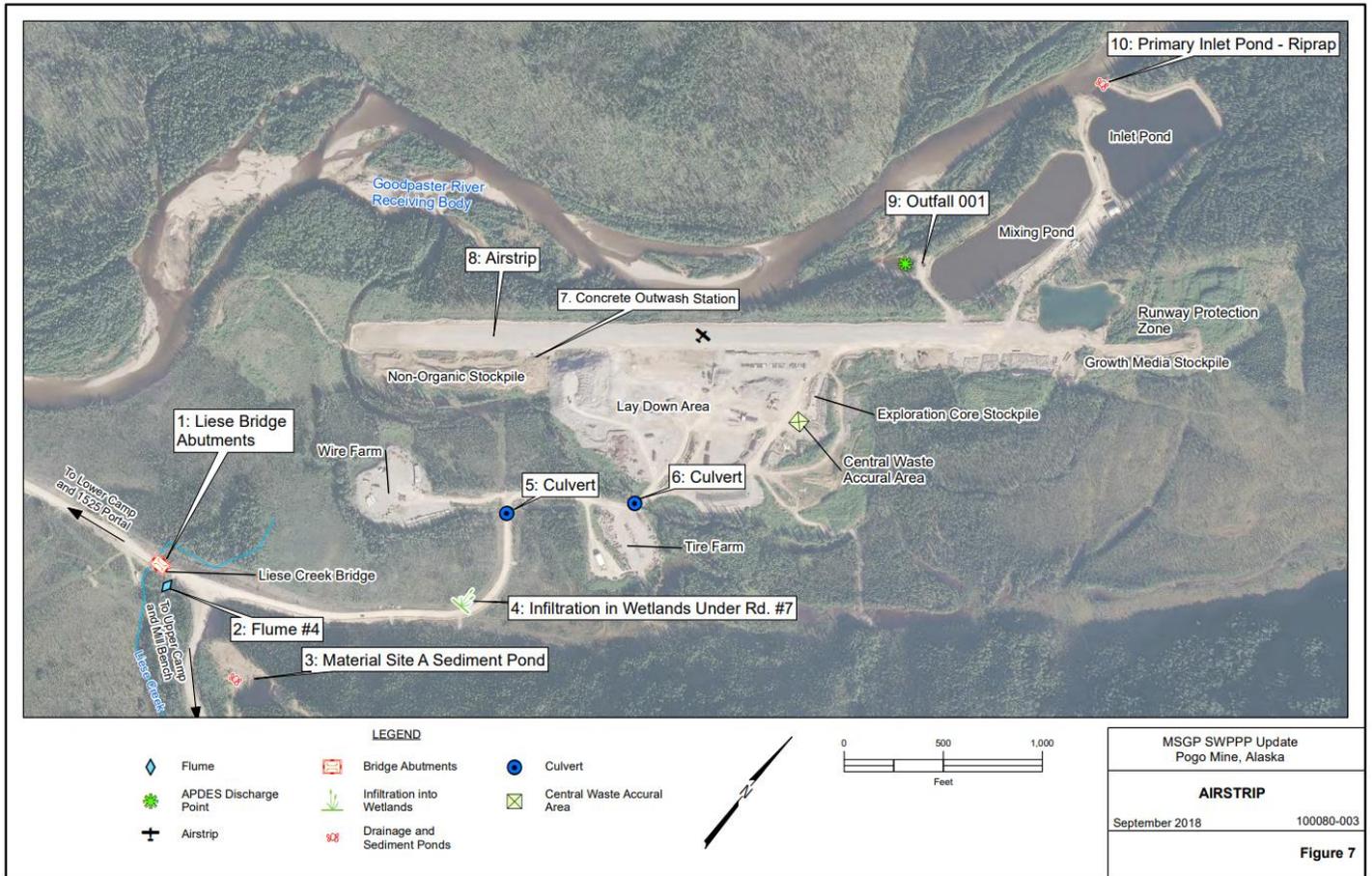
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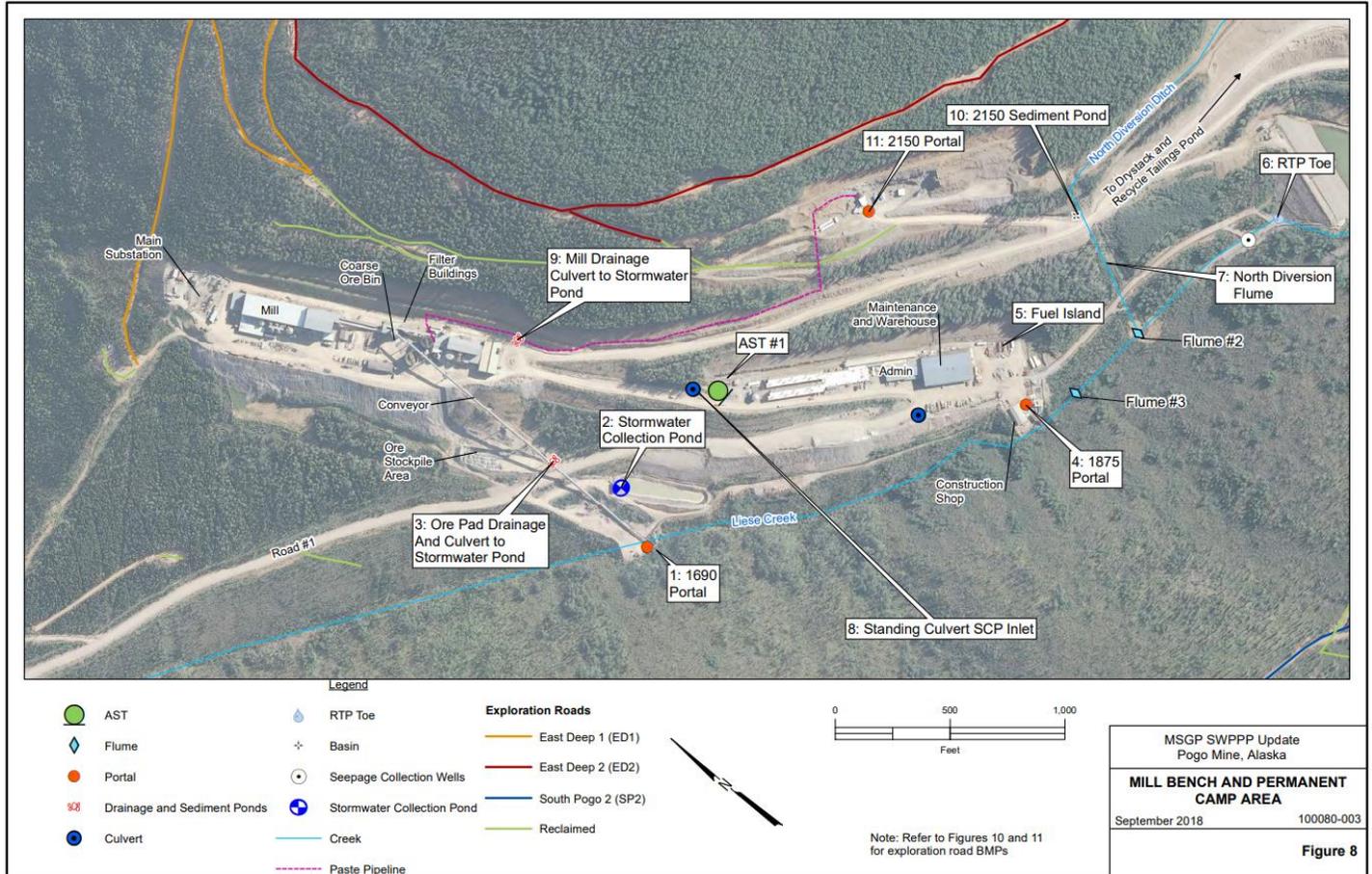
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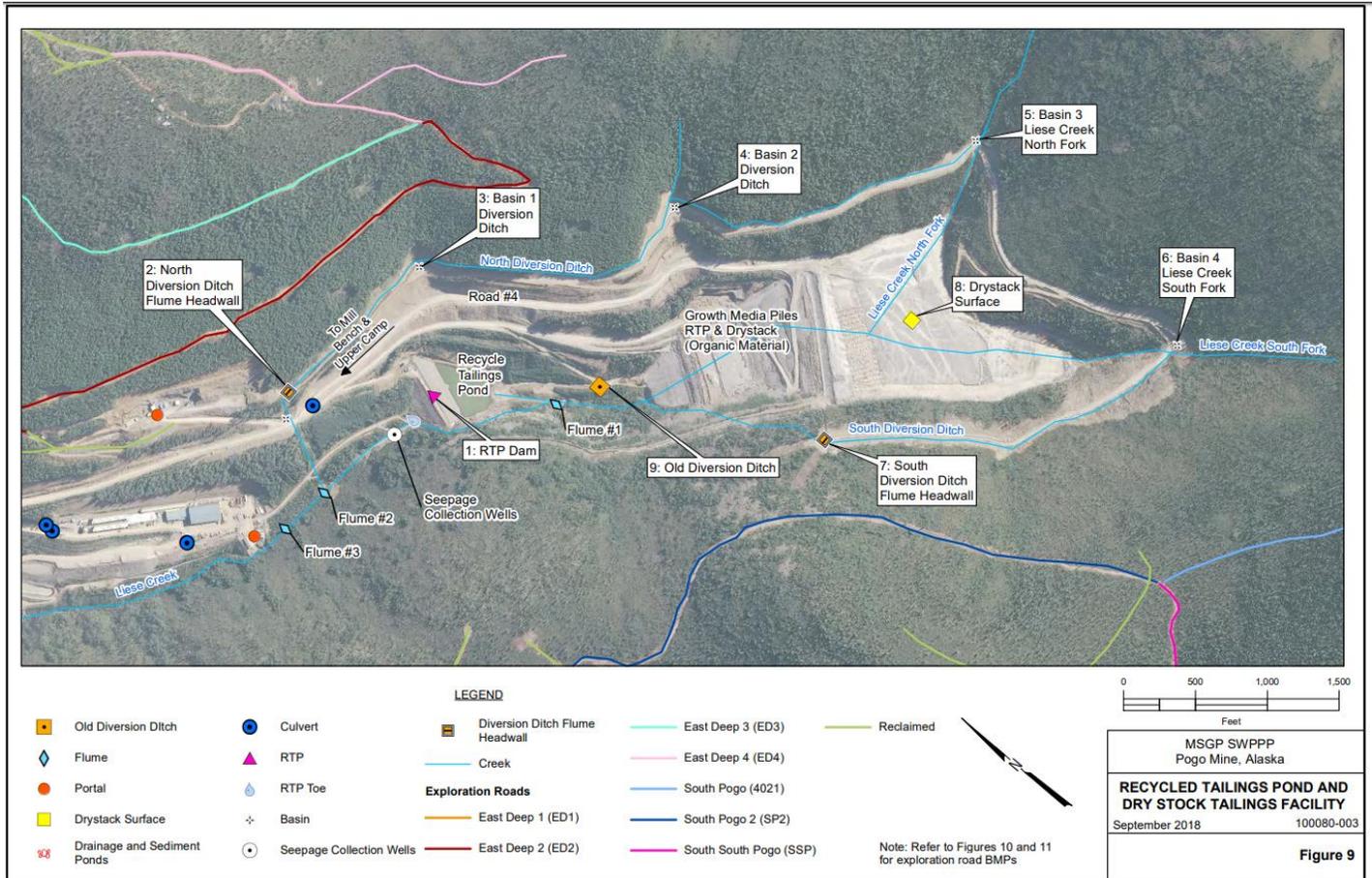
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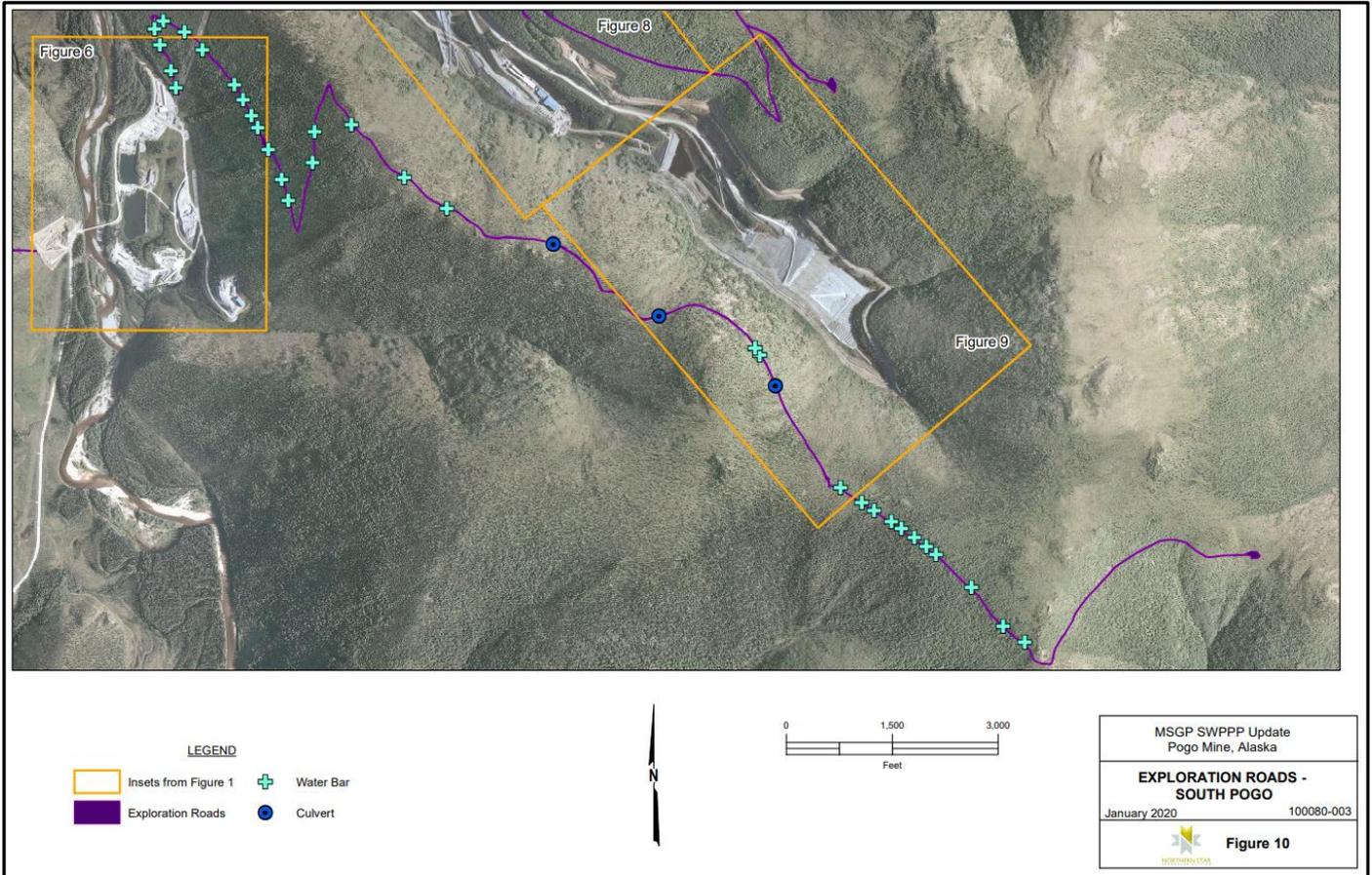
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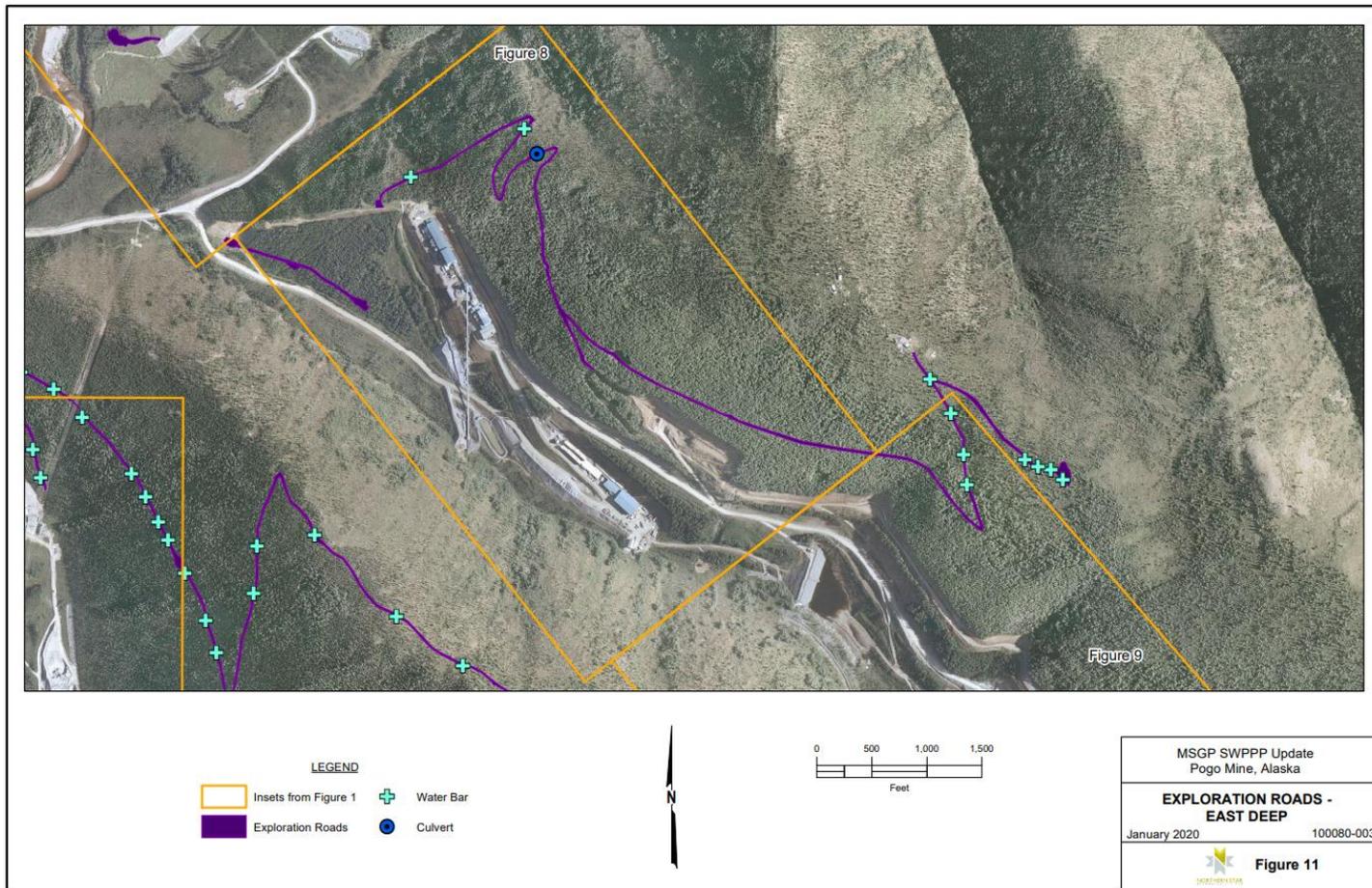
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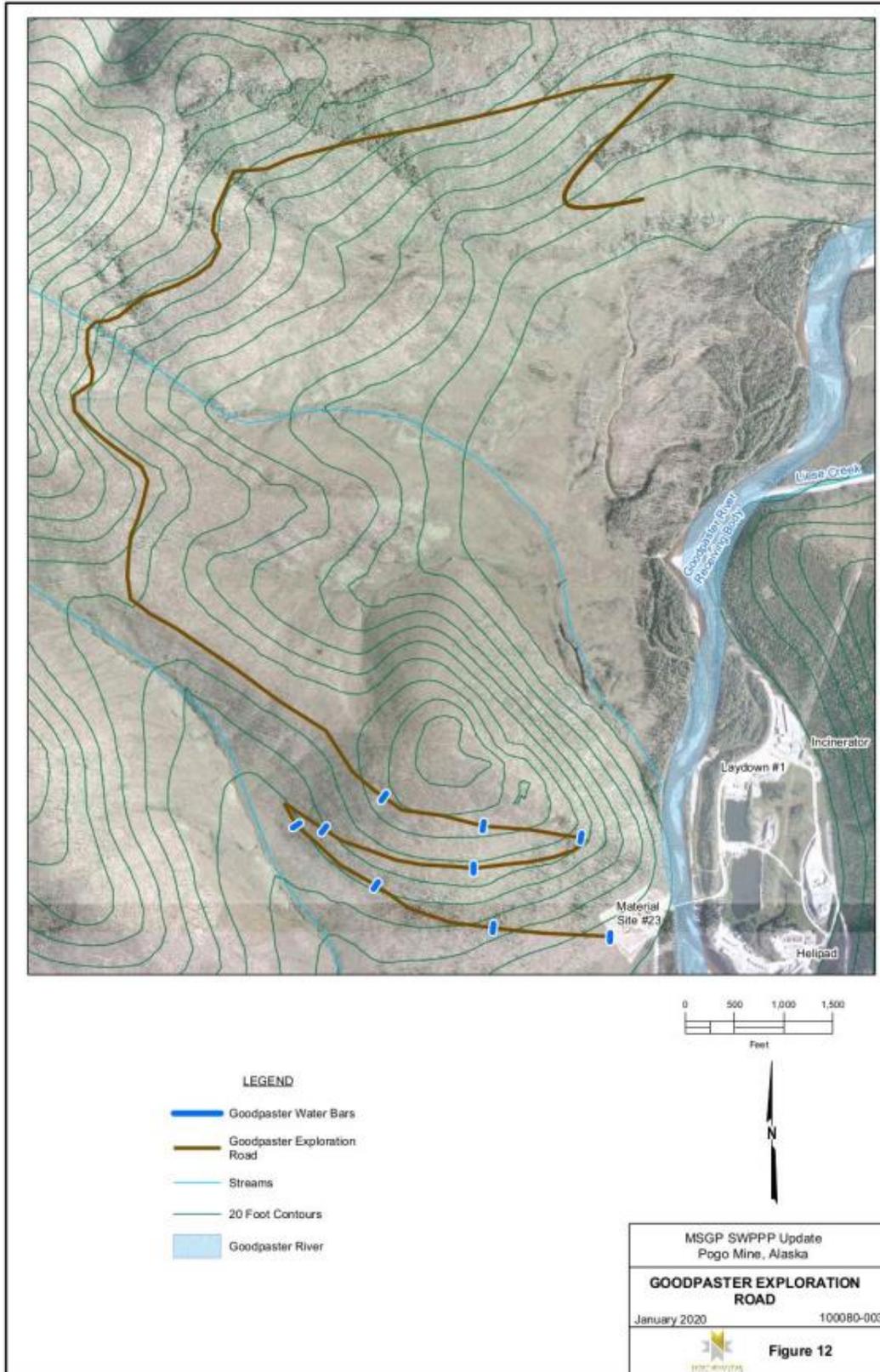
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STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

12.5 APPENDIX E – Spill Log History

Reportable Spill History Table - January 1, 2012 to December 31, 2019

Date	Spill Location	Material Spilled	Volume	Volume Recovered	Location of Potential Storm Water Impact
2/10/2012	Sewage Treatment Plant	Sewage	10 gallons	10 gallons	Storm Water Outfall SW21
2/11/2012	Mile 40 Access Road	Hydraulic Oil	5 gallons	5 gallons	Access Road
2/29/2012	1525 Bench	Hydraulic Oil	9.75 gallons	9.75 gallons	Storm Water Outfall SW21
6/20/2012	Mine Water Treatment Plant #2	Filter Press Sludge	10 gallons	10 gallons	Storm Water Outfall SW21
7/2/2012	Airport Weather Station	Antifreeze	1 gallon	1 gallon	Airstrip
7/11/2012	Road #3 Mill Bench	Hydraulic Oil	1 gallon	1 gallon	Storm Water Pond
8/12/2012	Lower Fuel Island	Antifreeze	1 gallon	1 gallon	Storm Water Pond
8/30/2012	Mile 33.2 Access Road	Diesel	30 gallons	30 gallons	Access Road
8/31/2012	Road #3 Near Diversion Ditch	Brakeline Oil Coolant	3 gallons	3 gallons	Storm Water Pond
10/1/2012	Road #3	Diesel & Transmission Fluid	3 gallons	3 gallons	Storm Water Pond
10/16/2012	Drystack Shell 3	Antifreeze	9.5 gallons	9.5 gallons	Storm Water Pond
11/12/2012	Road #3	Antifreeze	2 gallons	2 gallons	Storm Water Pond
3/22/2013	Road #3	Hydraulic Oil	4 gallons	4 gallons	Storm Water Pond
7/12/2013	Outside Truck Shop	Used Oil	2 gallons	2 gallons	Storm Water Pond
10/13/2013	1875 Fuel Island	Diesel	30 gallons	30 gallons	Storm Water Pond
11/22/2013	Lower Camp D Wing	Sewage	8000 gallons	8000 gallons	Storm Water Outfall SW21
1/7/2014	Main Camp	Engine Oil	1.5 gallons	1.5 gallons	Storm Water Pond
2/3/2014	Cement Silo	Coolant	3 gallons	3 gallons	Storm Water Pond
2/17/2014	1525 Road	Engine Oil	5 gallons	5 gallons	Storm Water Outfall SW21
3/27/2014	Mile 47.8 Access Road	Diesel	2 gallons	2 gallons	Access Road
4/8/2014	E-wing	Sewage/grey water	100 gallons	100 gallons	Storm Water Outfall SW21
4/30/2014	Generator 4	Diesel	5 gallons	5 gallons	Storm Water Outfall SW21
5/20/2014	Road 1 Blue Tube	Hydraulic Oil	2 gallons	2 gallons	Storm Water Pond
6/1/2014	AST-28 Containment	Diesel	130 gallons	130 gallons	Storm Water Pond
6/8/2014	Assay Lab Make-up Air Unit	Diesel	2 gallons	2 gallons	Storm Water Pond
6/23/2014	Dry Stack	Hydraulic Oil	2 gallons	2 gallons	Storm Water Pond
7/8/2014	41.75 Access Road	Engine Oil	5 gallons	5 gallons	Access Road
9/25/2014	1525 Bench	Coolant	5 gallons	5 gallons	Storm Water Outfall SW21

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STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

Date	Spill Location	Material Spilled	Volume	Volume Recovered	Location of Potential Storm Water Impact
10/17/2014	Core Shack	Diesel	1.5 gallons	1.5 gallons	Storm Water Outfall SW21
1/4/2015	East Side Paste Plant	Coolant	2 gallons	2 gallons	Storm Water Pond
3/21/2015	Dry Stack	Hydraulic Oil	2 gallons	2 gallons	Storm Water Pond
4/29/2015	Main Camp Kitchen	Sewage/Grey Water	360 gallons	360 gallons	Storm Water Pond
5/7/2015	1690 Portal	Paste	90,000 gallons	90,000 gallons	Storm Water Pond
5/21/2015	Next to Main Containment Building	Water with Petroleum Contamination	30 gallons	30 gallons	Storm Water Outfall SW21
7/29/2015	Road #4	Coolant	15 gallons	15 gallons	Storm Water Pond
7/30/2015	Road #1	Coolant	15 gallons	15 gallons	Storm Water Pond
9/8//2015	Pogo Access Road mile 37	Coolant	5 gallons	5 gallons	Access Road
9/13/2015	Air Strip-crusher Area	Hydraulic Oil	5 gallons	5 gallons	Outfall 001
9/14/2015	1525 Loading Area	Coolant	3 gallons	3 gallons	Storm Water Outfall SW21
9/28/2015	Pogo Access Road mile 17	Engine Oil	1 gallon	1 gallon	Access Road
12/9/2015	Mill Bench, North End Chateau	Hydraulic Oil	5 gallons	5 gallons	Storm Water Pond
12/24/2015	1525 Portal road, near bottom	Hydraulic Oil	25 gallons	25 gallons	Storm Water Outfall SW21
1/26/2016	Airstrip across from Met Station	Hydraulic Oil	2 gallons	2 gallons	Storm Water ORTW
2/1/2016	#2 Paste Line from Plant to 2150 Portal	Paste	3,500 gallons	3,500 gallons	Storm Water
2/3/2016	MWTP# 3	Ferric Chloride	1 Ounce	1 Ounce	Storm Water Outfall SW21
2/16/2016	Mill Bench Ball Mill	Delcor Trash Grind Waste	1 gallon	1 gallon	Storm Water Pond
3/1/2016	Roads 3 & 4	Hydraulic Oil	30 gallons	30 gallons	Storm Water Pond
3/5/2016	Road 1 (bottom of)	Coolant	10 gallons	10 gallons	Storm Water Pond Liese Creek
3/15/2016	Road 1 (near Blue Tube)	Coolant	10 gallons	10 gallons	Storm Water Pond
3/20/2016	Incinerator	Scrubber Water	500 gallons	500 gallons	Storm Water Pond
3/24/2016	Pogo Rd Mile 41	Diesel	8 gallons	8 gallons	Access Road
4/8/2016	Mill Bench CIP Tank	CIP Tails Slurry	1,500 gallons	1,500 gallons	Storm Water Pond
5/5/2016	Lower Camp Fuel Island	Diesel	5 gallons	5 gallons	Storm Water Outfall SW21
7/9/2016	Tire Yard	Antifreeze	2 gallons	2 gallons	Storm Water Outfall SW21
8/21/2016	1875 Fuel Island	Diesel	15 gallons	15 gallons	Storm Water Pond Liese Creek

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Date	Spill Location	Material Spilled	Volume	Volume Recovered	Location of Potential Storm Water Impact
9/23/2016	Intersection Roads 7 & 8	Antifreeze	2 gallons	2 gallons	Storm Water Pond Outfall SW21
10/9/2016	1875 Fuel Island, Road 1 and Road 6	Diesel	3 gallons	3 gallons	Storm Water Pond Liese Creek
10/25/2016	Mill Flootation Tails Thickener	Grind Water	5 gallons	5 gallons	Storm Water Pond
10/26/2016	Admin Office Parking	Sewer Water	10 gallons	10 gallons	Storm Water Pond
11/29/2016	Road 4 to Drystack	Diesel	3 gallons	3 gallons	Storm Water Pond
12/2/2016	MWTP# 2	Ferric Chloride	10.04 gallons	10.04 gallons	Storm Water Pond Outfall SW21
12/22/2016	Road 2 (by Roundabout)	Motor Oil & Hydraulic Oil	52 gallons	52 gallons	Storm Water Pond
1/11/2017	MWTP# 3 Connex	Ferric Chloride	½ cup	½ cup	Storm Water Pond Outfall SW21
1/17/2017	Road 1 (bottom of)	Transmission Oil	1 gallon	1 gallon	Storm Water Pond Liese Creek
1/19/2017	Road 1	Transmission Oil	10 gallons	10 gallons	Storm Water Pond
1/21/2017	Road 1 (top of)	Hydraulic Oil	2 gallons	2 gallons	Storm Water Pond
2/17/2017	1875 Road rock LD	Hydraulic Oil	5 gallons	5 gallons	Storm Water Pond Liese Creek
2/18/2017	1690 Portal	Paste	7,069 gallons	7,069 gallons	Storm Water Pond Liese Creek
2/20/2017	Sewage Treatment Plant	Raw Sewage	300 gallons	300 gallons	Pogo Creek
3/2/2017	1875 Fuel Island	Diesel	4 gallons	4 gallons	Storm Water Pond Liese Creek
4/5/2017	Upper Camp KDR	Dishwater	unknown	unknown	Storm Water Pond
4/7/2017	1690 Decline	Paste	400 gallons	400 gallons	Storm Water Pond Liese Creek
4/18/2017	Road 2	Motor Oil	4 gallons	4 gallons	Storm Water Pond
5/7/2017	1875 Fuel Island	Hydraulic Oil	4.8 gallons	4.8 gallons	Storm Water Pond
5/13/2017	1875 Fuel Island	Diesel	3.5 gallons	3.5 gallons	Storm Water Pond
6/2/2017	Sewage Treatment Plant	Treated Sewer Water	1,600 gallons	1,600 gallons	Storm Water Pond Outfall SW21
6/3/2017	Mill Bench Paste Plant	CIP Tails Mud	¾ gallons	¾ gallon	Storm Water Pond
6/14/2017	Mill	Leach Slurry	< 1 gallon	< 1 gallon	Storm Water Pond
7/9/2017	Drystack	Engine Oil	2 gallons	2 gallons	Storm Water Pond RTP
8/22/2017	1875 Roundabout	Hydraulic Oil	1 gallon	1 gallon	Storm Water Pond
Complete for 2017					
1/22/2018	HT Ready-Line (1875)	Hydraulic Oil	2 gallons	2 gallons	Storm Water Pond
1/24/2018	Incinerator	Scrubber Rinse Water	100 gallons	None	Storm Water Pond Outfall SW21

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STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

Date	Spill Location	Material Spilled	Volume	Volume Recovered	Location of Potential Storm Water Impact
2/21/2018	MEM to Tailings Building (Road 2)	Hydraulic Oil	2 gallons	2 gallons	Storm Water Pond
3/14/2018	Environmental Fuel Tank	Diesel in Containment	130 gallons	130 gallons	N/A
3/21/2018	Road 1 ~ 500 yds below Blue Tube	Antifreeze	1 gallon	1 gallon	Storm Water Pond
4/6/2018	Lower Camp Fuel Island	Diesel	3 gallons	3 gallons	Storm Water Pond Outfall SW21
5/11/2018	Bottom of Road #1	Hydraulic Oil	30 gallons	30 gallons	Storm Water Pond
5/13/2018	Between admin main hall and C wing	Raw Sewage	6,000 gallons	None	Storm Water Pond
6/6/2018	Bottom of Road #1	Antifreeze	1 gallon	1 gallon	Storm Water Pond
7/3/2018	1875 Roundabout Parking	Hydraulic Oil	2 gallons	2 gallons	Storm Water Pond
7/14/2018	Road 1 Just above 1690 Portal	Diesel	2 gallons	2 gallons	Storm Water Pond
7/25/2018	Gilles Creek on Access Road	Gasoline	1 gallon	unknown	Gilles Creek
8/16/2018	Road 2 Warehouse to Tailings Bldg.	Diesel	5 gallons	5 gallons	Storm Water Pond
9/29/2018	1525 Shop Pad	Hydraulic Oil	2.5 gallons	2.5 gallons	Storm Water Pond
9/29/2018	LC Lay Down Yard	Coolant	2 gallons	2 gallons	Storm Water Pond
10/8/2018	Diesel lines under Upper Camp A and B wing	Diesel	1 gallon	1 gallon	Storm Water Pond
10/10/2018	1525 Propane Fill Station	Hydraulic Oil	1.5 gallons	1.5 gallons	Storm Water Pond Outfall SW21
10/27/2018	1875 Fuel Island	Diesel	1 gallon	1 gallon	Storm Water Pond
Complete for 2018					
1/5/2019	Road 1-6, Tire Farm	Hydraulic Oil	1 gallon	1 gallon	Liese Creek
1/5/2019	Access Road Mile 2.5	Coolant	5 gallons	5 gallons	Access Road
2/2/2019	MEM Shop to Ready Line	Hydraulic Oil	1 gallon	1 gallon	Storm Water Pond
2/14/2019	Road 8 & 1525 Apron	Transmission Fluid	2.75 gallons	2.75 gallons	Storm Water Outfall SW21
2/21/2019	Airstrip Road	Coolant	1 gallon	1 gallon	Storm Water ORTW
2/27/2019	Mill Bench next to Leach Tank 2	CN Contacted Slurry	0.5 gallon	0.5 gallon	Storm Water Pond
3/9/2019	Lower half Road 1	Coolant	2 gallons	2 gallons	Storm Water Pond
4/3/2019	Calvin's Castle Bull Rail	Hydraulic Oil, Engine Oil	1.5 gallons	1.5 gallons	Storm Water ORTW
5/18/2019	Bone Yard	Hydraulic Oil	2 gallons	2 gallons	Storm Water ORTW
5/30/2019	1875 Fuel Island	Diesel	8 gallons	8 gallons	Storm Water Pond
6/6/2019	Road 4	Hydraulic Oil	8 gallons	8 gallons	Storm Water Pond
6/9/2019	1875 Fuel Island	Diesel	3 gallons	3 gallons	Storm Water Pond

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Date	Spill Location	Material Spilled	Volume	Volume Recovered	Location of Potential Storm Water Impact
6/23/2019	1875 Fuel Island	Diesel	1 gallon	1 gallon	Storm Water Pond
6/28/2019	Mill & RCM Connex	Grinding Circuit Slurry	35-45 gallons	35-45 gallons	Storm Water Pond
7/6/2019	Road 1	Hydraulic Oil	2 gallons	2 gallons	Storm Water Pond
7/10/2019	Bone Yard	Hydraulic Oil	2 gallons	2 gallons	Storm Water ORTW
7/19/2019	1875 Fuel Island	Diesel	1 gallon	1 gallon	Storm Water Pond
7/28/2019	Top of Road 1	Hydraulic Oil	5 gallons	5 gallons	Storm Water Pond
10/3/2019	1875 Roundabout	Coolant	5 gallons	5 gallons	Storm Water Pond
11/5/2019	1875 Roundabout	Hydraulic Oil	5 gallons	5 gallons	Storm Water Pond
11/6/2019	Road 7	Hydraulic Oil	12 gallons	12 gallons	Storm Water Outfall SW21
Complete for 2019					

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12.6 APPENDIX F – Outfall SW21 Sampling Data

Outfall SW21 Sampling Data

Sample Date	Sample Time	Duplicate Identifier	Total Suspend Solids (mg/L)	Turbidity, Field Results (NTU)	Turbidity, Lab Results (NTU)	pH, Field, Standard Units	pH, Lab, Standard Units	Hardness, Total (mg/L)	Antimony, Total (µg/L)	Arsenic, Total (µg/L)	Beryllium, Total (µg/L)	Cadmium, Total (µg/L)	Copper, Total (µg/L)	Iron, Total (µg/L)	Lead, Total (µg/L)	Mercury, Total (µg/L)	Nickel, Total (µg/L)	Selenium, Total (µg/L)	Silver, Total (µg/L)	Zinc, Total (µg/L)
04/30/2008	16:15		5.71	---	10.5	---	---	65	1.48	20.1	<0.128	0.101	0.816	432	0.2	0.00357	0.784	0.309	0.013	135
04/30/2008	16:15	1	5	---	10.3	---	---	66.9	1.57	20.9	<0.128	0.086	0.8	486	0.209	0.00341	0.747	0.312	0.012	149
04/30/2009	12:45	0	10	---	29.8	---	---	50.4	0.359	24.4	0.041	<0.065	3.64	1590	0.847	0.00892	2.12	0.093	<0.2	13
04/30/2009	13:00	1	10	---	31.9	---	---	51.8	0.343	24.5	0.038	<0.065	3.63	1630	0.856	0.0106	2.18	<0.075	<0.2	13.1
07/01/2009	07:25	0	---	---	---	---	---	---	---	---	---	---	---	756	---	---	---	---	---	---
09/02/2009	06:35	0	<3.5	---	0.907	---	---	103	0.208	6.19	<0.5	<0.065	2.05	136	<0.22	0.0025	0.631	<0.075	<0.2	1.76
10/26/2011	09:10	0	---	---	---	6.31	---	---	0.3	7.85	<0.045	<0.045	1.96	---	0.0508	0.00127	1.76	0.367	<0.028	0.719
10/13/2014	13:30	0	---	---	---	---	---	---	0.16	20.6	<0.076	0.172	2.8	---	0.791	---	1.03	0.682	<0.086	37.1
08/25/2015	12:30	0	---	---	---	7.15	7.1	---	<1	8	<1	<0.08	2	---	<0.3	<0.005	<5	<1	<0.1	<10
05/03/2016	11:15	0	<10	---	3	6.01	---	29	<1	14	<1	<0.08	3	388	0.1	0.018	1	<1	<0.1	42
08/02/2016	18:20	0	<10	0.78	0.6	6.85	---	69	<1	16	<1	<0.08	2	134	<0.1	<0.005	<1	<1	<0.1	55
04/30/2017	07:45	0	<10	4.27	3.2	6.68	---	53	<1	17	<1	<0.08	3	359	0.4	0.011	2	<1	<0.1	75
07/04/2017	11:17	0	12	4.7	4.5	6.79	---	125	<1	19	<1	<0.08	3	446	0.2	<0.005	1	<1	<0.1	36
07/04/2017	11:20	0	---	4.7	---	6.79	7	---	<1	19	<1	<0.03	3	---	<0.3	<0.005	<5	<1	<0.1	34
10/02/2017	12:00	0	<10	0.38	0.4	7.34	---	85	<1	7	<1	<0.08	2	51	<0.1	<0.005	<1	<1	<0.1	36
10/02/2017	12:00	1	<10	---	0.6	---	---	88	<1	8	<1	<0.08	2	54	<0.1	<0.005	<1	<1	<0.1	38

Notes:

- Primary samples are identified with a "0" in the Duplicate Identifier column.
- Field-duplicate samples are identified with a "1" in the Duplicate Identifier column.

µg/L - microgram per litre

mg/L - milligrams per litre

NTU - nephelometric turbidity unit

--- Analysis not requested

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Water Quality Monitoring Data

Site Number	Sample Date	Sample Time	Duplicate Identifier	1,2-DICHLOROETHAN E-D4, % recovery	Ammonia, mg/kg	Antimony, Total (ug/l as Sb)	Arsenic, Total (ug/l as As)	Barium, Total (ug/l as Ba)	Benzene, (ug/l)	Beryllium, Total (ug/l as Be)	Cadmium, Total (ug/l as Cd)	Calcium, Total (mg/l as Ca)	Chromium, Total (ug/l as Cr)	Cobalt, Total (ug/l as Co)	Copper, Total (ug/l as Cu)	DIBROMOFLUORO METHANE, % recovery	Ethylbenzene, ug/l
SW21	04/30/2008	16:15	0			1.48	20.1			-0.128	0.101	17.3			0.816		
SW21	04/30/2008	16:15	1			1.57	20.9			-0.128	0.086	17.6			0.8		
SW21	04/30/2009	12:45	0			0.359	24.4			0.041	-0.065	13.9			3.64		
SW21	04/30/2009	13:00	1			0.343	24.5			0.038	-0.065	14.3			3.63		
SW21	07/01/2009	07:25	0														
SW21	09/02/2009	06:35	0			0.208	6.19			-0.5	-0.065	28			2.05		
SW21	10/26/2011	09:10	0		0.0069	0.3	7.85	24.1		-0.045	-0.045		0.774	0.588	1.96		
SW21	10/13/2014	13:30	0		0.1	0.16	20.6	34		-0.076	0.172		1.01	0.679	2.8		
SW21	08/25/2015	12:30	0	96		-1	8	-50	-1	-1	-0.08		-5	-5	2	90	-1
SW21	05/03/2016	11:15	0			-1	14			-1	-0.08	8			3		
SW21	08/02/2016	18:20	0			-1	16			-1	-0.08	19			2		
SW21	04/30/2017	07:45	0			-1	17			-1	-0.08	15			3		
SW21	07/04/2017	11:17	0			-1	19			-1	-0.08	35			3		
SW21	07/04/2017	11:20	0			-1	19	-50		-1	-0.03		-5	-5	3		
SW21	10/02/2017	12:00	0			-1	7			-1	-0.08	23			2		
SW21	10/02/2017	12:00	1			-1	8			-1	-0.08	24			2		

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Site Number	Sample Date	Sample Time	Hardness, Total (mg/l as CaCO ₃)	Iron, Total (ug/l as Fe)	Lead, Total (ug/l as Pb)	Magnesium, Total (mg/l as Mg)	Manganese, Total (ug/l as Mn)	Mercury, Total (ug/l as Hg)	Nickel, Total (ug/l as Ni)	Nitrite plus Nitrate, Total (mg/l as N)	Oxygen, Dissolved mg/l	O-xylene In Water, ug/l	pH, Field, Standard Units	pH, Lab, Standard Units	Selenium, Total (ug/l as Se)	Silver, Total (ug/l as Ag)	Specific Conductance (umhos/cm @ 25C)
SW21	04/30/2008	16:15	65	432	0.2	5.31	222	0.0035	0.784						0.309	0.013	
SW21	04/30/2008	16:15	66.9	486	0.209	5.56	229	0.0034	0.747						0.312	0.012	
SW21	04/30/2009	12:45	50.4	1590	0.847	3.8	148	0.0089	2.12						0.093	-0.2	
SW21	04/30/2009	13:00	51.8	1630	0.856	3.89	150	0.0106	2.18						-0.075	-0.2	
SW21	07/01/2009	07:25		756													
SW21	09/02/2009	06:35	103	136	-0.22	8.07	10.9	0.0025	0.631						-0.075	-0.2	
SW21	10/26/2011	09:10			0.0508		108	0.0012	1.76	0.857	0.03		6.31		0.367	-0.028	
SW21	10/13/2014	13:30			0.791		71.1		1.03	1.17					0.682	-0.086	
SW21	08/25/2015	12:30			-0.3		23	-0.005	-5	1.8	8.7	-1	7.15	7.1	-1	-0.1	
SW21	05/03/2016	11:15	29	388	0.1	2	29	0.018	1		13.4		6.01		-1	-0.1	
SW21	08/02/2016	18:20	69	134	-0.1	5	28	-0.005	-1				6.85		-1	-0.1	159
SW21	04/30/2017	07:45	53	359	0.4	4	52	0.011	2		11.2		6.68		-1	-0.1	
SW21	07/04/2017	11:17	125	446	0.2	9	93	-0.005	1		6.73		6.79		-1	-0.1	
SW21	07/04/2017	11:20			-0.3		94	-0.005	-5	9	6.73		6.79	7	-1	-0.1	
SW21	10/02/2017	12:00	85	51	-0.1	7	22	-0.005	-1		11.1		7.34		-1	-0.1	
SW21	10/02/2017	12:00	88	54	-0.1	7	23	-0.005	-1						-1	-0.1	

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Site Number	Sample Date	Sample Time	Specific Conductance, Field (umhos/cm @ 25C)	Temperature, Water (Degrees Fahrenheit)	Thallium, Total (ug/l as Tl)	Toluene, (ug/l)	Toluene-d8 - volatile, %	Total Suspend Solids (Tot. Nonfilterable Residue), mg/l	Turbidity, Field Nephelometric Turbidity Units, NTU	Turbidity, Lab Nephelometric Turbidity Units, NTU	Vanadium, Total (ug/l as V)	Water Temperature (Deg. C)	Weak Acid Dissociable Cyanide, ug/l	XYLENE, META & PARA, UG/L	Xylene, Total, (ug/l)	Zinc, Total (ug/l as Zn)
SW21	04/30/2008	16:15						5.71		10.5						135
SW21	04/30/2008	16:15						5		10.3						149
SW21	04/30/2009	12:45						10		29.8						13
SW21	04/30/2009	13:00						10		31.9						13.1
SW21	07/01/2009	07:25														
SW21	09/02/2009	06:35						-3.5		0.907						1.76
SW21	10/26/2011	09:10	209		-0.017						-1.4	1.52	-10			0.719
SW21	10/13/2014	13:30			-0.041						1.68		-1.2			37.1
SW21	08/25/2015	12:30	166	47	-0.5	-1	86				-10	8.81	-4	-1	-1	-10
SW21	05/03/2016	11:15	61	41				-10		3		5.32				42
SW21	08/02/2016	18:20		50				-10	0.78	0.6		10.3				55
SW21	04/30/2017	07:45	128	34				-10	4.27	3.2		1.36				75
SW21	07/04/2017	11:17	332	57				12	4.7	4.5		14.34				36
SW21	07/04/2017	11:20	332	57	-0.5				4.7		-10	14.34	-4			34
SW21	10/02/2017	12:00	215	3				-10	0.38	0.4		2.2				36
SW21	10/02/2017	12:00						-10		0.6						38

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Goodpaster Hardness Data

Site Number	Sample Date	Sample Time	Duplicate Identifier	Hardness, Total (mg/l as CaCO3)
SW01	02/20/2008	11:15	0	66.6
SW01	05/20/2008	15:32	0	41
SW01	06/25/2008	00:00	1	32.8
SW01	06/25/2008	11:10	0	32.2
SW01	08/06/2008	11:40	0	41.7
SW01	09/30/2008	12:30	0	58.4
SW01	10/08/2008	10:42	0	58.2
SW01	12/04/2008	10:36	0	64.9
SW01	02/25/2009	10:06	0	66.1
SW01	05/20/2009	10:10	0	40.4
SW01	05/20/2009	10:15	1	41.2
SW01	06/09/2009	18:45	0	43.8
SW01	08/12/2009	09:32	0	53.8
SW01	08/12/2009	09:40	1	54.8
SW01	09/22/2009	00:00	0	46.2
SW01	12/09/2009	09:40	0	62.2
SW01	02/24/2010	09:00	0	64.4
SW01	02/24/2010	09:05	1	64.2
SW01	03/17/2010	09:30	0	63.9
SW01	05/19/2010	09:50	0	42.9
SW01	06/16/2010	09:45	0	41.3
SW01	08/11/2010	10:11	0	51
SW01	09/29/2010	10:55	0	61
SW01	12/08/2010	10:10	0	66
SW01	02/23/2011	11:20	0	62
SW01	02/23/2011	11:20	1	64
SW01	03/24/2011	08:20	0	67
SW01	05/18/2011	08:30	0	31
SW01	06/15/2011	08:00	0	33
SW01	08/10/2011	09:30	0	67
SW01	08/10/2011	09:30	1	51
SW01	09/27/2011	14:00	0	51
SW01	12/14/2011	10:05	0	67
SW01	03/14/2012	10:30	0	63
SW01	05/16/2012	09:30	0	54
SW01	06/12/2012	13:25	0	39
SW01	07/19/2012	01:40	0	43
SW01	07/19/2012	01:40	1	44
SW01	09/18/2012	14:40	0	60

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SW01	01/08/2013	13:35	0	62
SW01	03/05/2013	14:30	0	60
SW01	06/25/2013	13:00	0	51
SW01	07/10/2013	08:05	0	40
SW01	08/21/2013	13:00	0	56
SW01	09/17/2013	15:00	0	50
SW01	12/22/2013	15:15	0	62
SW01	02/18/2014	11:50	0	67
SW01	05/20/2014	08:00	0	42
SW01	07/10/2014	08:30	0	46
SW01	08/12/2014	09:00	0	48
SW01	09/23/2014	10:15	0	54
SW01	12/09/2014	10:50	0	66
SW01	03/03/2015	12:45	0	68
SW01	03/03/2015	12:45	1	67
SW01	05/19/2015	10:00	0	31.2
SW01	06/24/2015	10:30	0	51
SW01	06/24/2015	10:35	0	54
SW01	08/04/2015	16:00	0	51
SW01	09/29/2015	14:45	0	57
SW01	12/09/2015	11:05	0	64
SW01	03/01/2016	14:45	0	67
SW01	03/01/2016	14:45	1	66
SW01	05/19/2016	09:15	0	40
SW01	06/14/2016	10:50	0	38
SW01	08/02/2016	16:50	0	46
SW01	09/20/2016	17:15	0	63
SW01	12/06/2016	10:53	0	70
SW01	03/09/2017	11:45	0	70
SW01	03/09/2017	11:45	1	69
SW01	05/15/2017	15:15	0	25
SW01	08/15/2017	12:55	0	51
SW01	09/26/2017	14:50	0	60
SW01	12/11/2017	11:23	0	65
SW12	09/30/2008	00:00	1	57.1
SW12	09/30/2008	11:10	0	55.6
SW12	09/22/2009	14:34	0	49.8
SW12	09/22/2009	14:34	1	47
SW12	09/29/2010	09:35	0	64
SW12	09/29/2010	09:35	1	66
SW12	09/27/2011	12:40	0	51
SW12	09/27/2011	12:40	1	51

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SW12	09/18/2012	15:35	0	68
SW12	09/18/2012	15:35	1	67
SW12	09/17/2013	12:45	0	57
SW12	09/17/2013	12:45	1	57
SW12	09/23/2014	11:35	0	59
SW12	09/23/2014	11:35	1	60
SW12	09/29/2015	13:00	0	63
SW12	09/29/2015	13:00	1	62
SW12	09/20/2016	13:45	0	67
SW12	09/20/2016	13:45	1	66
SW12	09/26/2017	10:20	0	66
SW12	09/26/2017	10:20	1	65
SW15	02/20/2008	00:00	1	73.4
SW15	02/20/2008	09:30	0	66.6
SW15	05/20/2008	14:44	0	48
SW15	06/25/2008	09:20	0	33.3
SW15	08/06/2008	10:40	0	46.3
SW15	09/30/2008	11:30	0	59.1
SW15	10/08/2008	09:49	0	63
SW15	12/04/2008	09:54	0	70.4
SW15	02/25/2009	09:31	0	75.9
SW15	05/20/2009	09:36	0	45.9
SW15	06/09/2009	18:15	0	46.5
SW15	08/12/2009	09:20	0	60.9
SW15	09/22/2009	15:15	0	47.8
SW15	12/09/2009	11:20	0	73.8
SW15	02/24/2010	09:30	0	70.3
SW15	03/17/2010	09:50	0	67.5
SW15	03/17/2010	10:30	1	68.8
SW15	05/19/2010	09:10	0	44.2
SW15	05/19/2010	09:15	1	44
SW15	06/16/2010	10:00	0	43.3
SW15	08/11/2010	10:30	0	57
SW15	09/29/2010	10:01	0	67
SW15	12/08/2010	10:25	0	70
SW15	02/23/2011	11:40	0	68
SW15	03/24/2011	08:50	0	76
SW15	03/24/2011	08:50	1	76
SW15	05/18/2011	09:00	0	33
SW15	06/15/2011	09:00	0	50
SW15	08/10/2011	11:00	0	77
SW15	09/27/2011	13:05	0	58

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SW15	12/14/2011	10:45	0	72
SW15	12/14/2011	10:45	1	74
SW15	03/14/2012	11:00	0	70
SW15	05/16/2012	10:30	0	55
SW15	06/12/2012	15:25	0	42
SW15	06/12/2012	15:25	1	43
SW15	07/19/2012	02:55	0	47
SW15	09/18/2012	15:15	0	67
SW15	01/08/2013	15:00	0	71
SW15	03/05/2013	16:30	0	72
SW15	03/05/2013	16:30	1	74
SW15	06/25/2013	14:00	0	54
SW15	06/25/2013	14:00	1	54
SW15	07/10/2013	09:30	0	45
SW15	08/21/2013	13:30	0	58
SW15	09/17/2013	14:30	0	55
SW15	12/22/2013	16:00	0	67
SW15	02/18/2014	13:00	0	75
SW15	05/20/2014	09:45	0	44
SW15	07/10/2014	09:25	0	52
SW15	08/12/2014	11:00	0	55
SW15	09/23/2014	11:15	0	60
SW15	12/09/2014	11:10	0	73
SW15	03/03/2015	11:00	0	76
SW15	05/19/2015	10:30	0	31.9
SW15	05/19/2015	10:30	1	33
SW15	06/24/2015	09:30	0	55
SW15	06/24/2015	09:35	0	56
SW15	08/04/2015	15:05	0	55
SW15	09/29/2015	13:45	0	62
SW15	12/09/2015	10:10	0	71
SW15	03/01/2016	13:45	0	75
SW15	05/19/2016	08:15	0	43
SW15	05/19/2016	08:15	1	43
SW15	06/14/2016	09:43	0	42
SW15	08/02/2016	15:15	0	52
SW15	09/20/2016	15:30	0	68
SW15	12/06/2016	10:00	0	80
SW15	03/09/2017	10:15	0	78
SW15	05/15/2017	14:03	0	27
SW15	05/15/2017	14:03	1	27
SW15	08/15/2017	11:35	0	57

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SW15	09/26/2017	12:40	0	65
SW15	12/11/2017	10:10	0	70
SW41	02/20/2008	10:30	0	68.9
SW41	05/20/2008	00:00	1	47.7
SW41	05/20/2008	15:06	0	45.6
SW41	06/25/2008	10:50	0	33.4
SW41	08/06/2008	11:25	0	44.4
SW41	09/30/2008	12:10	0	62
SW41	10/08/2008	10:25	0	63.1
SW41	12/04/2008	10:25	0	68.7
SW41	02/25/2009	09:52	0	72.2
SW41	05/20/2009	09:57	0	45.6
SW41	06/09/2009	18:46	1	45.1
SW41	06/09/2009	18:59	0	46.1
SW41	08/12/2009	10:15	0	58.4
SW41	09/22/2009	14:34	1	47.6
SW41	09/22/2009	16:00	0	47.2
SW41	12/09/2009	10:15	0	74.3
SW41	02/24/2010	10:00	0	69.6
SW41	03/17/2010	09:40	0	65.9
SW41	05/19/2010	10:15	0	42.8
SW41	06/16/2010	08:50	0	41.4
SW41	06/16/2010	08:55	1	42.1
SW41	08/11/2010	11:40	0	57
SW41	08/11/2010	11:40	1	56
SW41	09/29/2010	10:35	0	64
SW41	12/08/2010	10:20	0	69
SW41	02/23/2011	11:50	0	67
SW41	03/24/2011	08:30	0	71
SW41	05/18/2011	08:00	0	33
SW41	05/18/2011	08:00	1	34
SW41	06/15/2011	09:30	0	46
SW41	08/10/2011	10:15	0	73
SW41	09/27/2011	13:45	0	55
SW41	12/14/2011	10:15	0	70
SW41	03/14/2012	10:45	0	68
SW41	03/14/2012	10:45	1	69
SW41	05/16/2012	09:45	0	55
SW41	06/12/2012	14:30	0	42
SW41	07/19/2012	02:25	0	46
SW41	09/18/2012	15:00	0	66
SW41	01/08/2013	14:15	0	69

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SW41	03/05/2013	15:30	0	70
SW41	06/25/2013	15:00	0	54
SW41	07/10/2013	10:15	0	45
SW41	07/10/2013	10:15	1	45
SW41	08/21/2013	13:15	0	54
SW41	09/17/2013	16:30	0	54
SW41	12/22/2013	14:00	0	64
SW41	02/18/2014	12:40	0	73
SW41	02/18/2014	12:40	1	72
SW41	05/20/2014	08:15	0	45
SW41	05/20/2014	08:15	1	45
SW41	07/10/2014	09:00	0	50
SW41	08/12/2014	10:00	0	53
SW41	08/12/2014	10:00	1	53
SW41	09/23/2014	10:35	0	58
SW41	12/09/2014	11:25	0	72
SW41	03/03/2015	11:40	0	73
SW41	05/19/2015	11:30	0	31.6
SW41	06/24/2015	10:00	0	55
SW41	06/24/2015	10:05	0	55
SW41	06/24/2015	10:15	0	55
SW41	08/04/2015	15:40	0	54
SW41	09/29/2015	14:15	0	62
SW41	12/09/2015	10:41	0	67
SW41	12/09/2015	10:42	0	69
SW41	03/01/2016	14:20	0	74
SW41	05/03/2016	15:15	0	35
SW41	05/19/2016	08:47	0	42
SW41	06/14/2016	10:15	0	41
SW41	06/14/2016	10:15	1	42
SW41	08/02/2016	16:00	0	50
SW41	08/02/2016	16:05	0	51
SW41	09/20/2016	16:05	0	67
SW41	12/06/2016	10:31	0	79
SW41	03/09/2017	11:00	0	76
SW41	04/30/2017	08:00	0	70
SW41	05/15/2017	14:40	0	27
SW41	06/22/2017	10:09	0	54.7
SW41	07/04/2017	12:10	0	47
SW41	08/15/2017	12:25	0	55
SW41	09/26/2017	13:15	0	66
SW41	10/02/2017	12:30	0	60

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SW41	12/11/2017	10:52	0	70
SW42	02/20/2008	10:10	0	70.7
SW42	05/20/2008	14:52	0	48.2
SW42	06/25/2008	10:22	0	33.7
SW42	08/06/2008	00:00	1	45.4
SW42	08/06/2008	11:00	0	44.7
SW42	09/20/2008	10:12	0	56
SW42	09/20/2008	10:13	1	56
SW42	09/30/2008	11:55	0	60.2
SW42	10/08/2008	10:06	0	62.3
SW42	12/04/2008	00:00	1	69.9
SW42	12/04/2008	10:15	0	69.2
SW42	02/25/2009	09:40	0	73.8
SW42	05/20/2009	09:45	0	43.4
SW42	06/09/2009	18:30	0	45.2
SW42	08/12/2009	09:07	0	59
SW42	09/22/2009	15:45	0	46.6
SW42	12/09/2009	10:45	0	70.2
SW42	02/24/2010	10:30	0	70.5
SW42	03/17/2010	10:10	0	72
SW42	05/19/2010	10:40	0	41.8
SW42	06/16/2010	10:15	0	43.1
SW42	08/11/2010	11:00	0	55
SW42	09/29/2010	10:18	0	64
SW42	12/08/2010	10:30	0	70
SW42	12/08/2010	10:30	1	70
SW42	02/23/2011	12:00	0	69
SW42	03/24/2011	08:40	0	71
SW42	05/18/2011	08:45	0	33
SW42	06/15/2011	08:30	0	50
SW42	06/15/2011	08:30	1	47
SW42	08/10/2011	10:45	0	88
SW42	09/27/2011	13:20	0	55
SW42	12/14/2011	10:25	0	71
SW42	03/14/2012	10:50	0	68
SW42	05/16/2012	10:00	1	48
SW42	06/12/2012	14:55	0	43
SW42	07/19/2012	02:40	0	46
SW42	09/18/2012	15:10	0	66
SW42	01/08/2013	14:50	0	72
SW42	01/08/2013	14:50	1	71
SW42	03/05/2013	16:00	0	71

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SW42	06/25/2013	15:30	0	54
SW42	07/10/2013	09:45	0	42
SW42	08/21/2013	14:00	0	55
SW42	09/17/2013	15:00	0	53
SW42	12/22/2013	15:30	0	65
SW42	12/22/2013	15:30	1	64
SW42	02/18/2014	13:00	0	74
SW42	05/20/2014	09:15	0	44
SW42	07/10/2014	09:15	0	50
SW42	08/12/2014	10:30	0	54
SW42	09/23/2014	11:00	0	59
SW42	12/09/2014	11:35	0	71
SW42	12/09/2014	11:35	1	72
SW42	03/03/2015	11:20	0	75
SW42	05/19/2015	12:00	0	33.6
SW42	06/24/2015	09:45	0	55
SW42	06/24/2015	09:50	0	56
SW42	08/04/2015	15:15	0	54
SW42	08/04/2015	15:16	0	55
SW42	09/29/2015	14:00	0	60
SW42	12/09/2015	10:25	0	71
SW42	03/01/2016	14:00	0	74
SW42	05/19/2016	08:35	0	42
SW42	06/14/2016	10:00	0	42
SW42	08/02/2016	15:30	0	53
SW42	08/02/2016	15:30	1	52
SW42	09/20/2016	15:45	0	66
SW42	12/06/2016	10:13	0	79
SW42	03/09/2017	10:40	0	75
SW42	05/15/2017	14:26	0	27
SW42	08/15/2017	12:00	0	57
SW42	08/15/2017	12:00	1	55
SW42	09/26/2017	13:00	0	67
SW42	12/11/2017	10:28	0	75
SW49	04/25/2016	15:40	0	41
SW49	04/26/2016	15:06	0	36
SW49	04/27/2016	07:50	0	34
SW49	04/28/2016	16:05	0	39
SW49	04/29/2016	14:00	0	43
SW49	04/30/2016	14:30	0	47
SW49	05/01/2016	14:45	0	49
SW49	05/02/2016	14:15	0	52

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SW49	05/04/2016	09:08	0	32
SW49	05/19/2016	09:01	0	40
SW49	06/14/2016	10:40	0	39
SW49	07/20/2016	07:40	0	42
SW49	07/27/2016	06:20	0	47
SW49	08/02/2016	16:25	0	49
SW49	08/02/2016	16:25	1	49
SW49	08/10/2016	06:30	0	54
SW49	08/17/2016	17:55	0	57
SW49	08/24/2016	06:45	0	61
SW49	08/31/2016	08:10	0	60
SW49	09/06/2016	11:33	0	62
SW49	09/14/2016	07:50	0	63
SW49	09/21/2016	08:35	0	64
SW49	09/28/2016	07:50	0	67
SW49	10/04/2016	15:00	0	67
SW49	10/12/2016	08:30	0	70
SW49	10/18/2016	17:00	0	75
SW49	10/26/2016	08:45	0	66
SW49	10/26/2016	08:45	1	66
SW49	12/06/2016	10:42	0	72
SW49	01/24/2017	13:15	0	70
SW49	03/09/2017	11:25	0	69
SW49	03/29/2017	07:40	0	73
SW49	04/04/2017	13:00	0	74
SW49	04/11/2017	15:00	0	74
SW49	04/18/2017	17:15	0	77
SW49	04/24/2017	17:30	0	73
SW49	04/26/2017	08:25	0	70
SW49	05/01/2017	15:45	0	53
SW49	05/03/2017	08:10	0	49
SW49	05/08/2017	14:05	0	34
SW49	05/08/2017	14:05	1	34
SW49	05/10/2017	08:29	0	33
SW49	05/15/2017	15:00	0	25
SW49	05/17/2017	07:03	0	30
SW49	05/22/2017	15:00	0	44
SW49	05/24/2017	08:24	0	41
SW49	05/31/2017	08:23	0	49
SW49	06/05/2017	14:50	0	51
SW49	06/05/2017	14:50	1	52
SW49	06/07/2017	07:40	0	50

Prepared by:	Nathan Kehoe	Document Status:	Uncontrolled
Approved by:	Environmental Manager	Review Date:	11 May 2022
		Approver's Signature:	Jill Ladegard

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SW49	06/12/2017	15:50	0	38
SW49	06/14/2017	08:10	0	45
SW49	06/19/2017	14:46	0	58
SW49	06/21/2017	07:23	0	57
SW49	06/26/2017	16:42	0	54
SW49	06/28/2017	07:27	0	51
SW49	07/03/2017	17:10	0	43
SW49	07/05/2017	07:33	0	46
SW49	07/10/2017	14:02	0	53
SW49	07/12/2017	08:09	0	55
SW49	07/17/2017	16:10	0	57
SW49	07/19/2017	08:27	0	55
SW49	07/24/2017	16:20	0	53
SW49	07/26/2017	08:30	0	54
SW49	07/31/2017	16:29	0	55
SW49	08/02/2017	08:15	0	57
SW49	08/07/2017	17:03	0	60
SW49	08/09/2017	08:18	0	58
SW49	08/14/2017	16:35	0	58
SW49	08/14/2017	16:35	1	58
SW49	08/15/2017	12:37	0	52
SW49	08/16/2017	08:30	0	51
SW49	08/28/2017	17:23	0	54
SW49	08/30/2017	09:00	0	57
SW49	09/04/2017	17:20	0	64
SW49	09/06/2017	07:50	0	65
SW49	09/06/2017	07:50	1	64
SW49	09/11/2017	11:27	0	66
SW49	09/13/2017	09:00	0	67
SW49	09/26/2017	16:40	0	63
SW49	10/04/2017	07:39	0	64
SW49	11/01/2017	08:46	0	65
SW49	11/20/2017	08:15	0	
SW49	12/11/2017	11:08	0	63

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12.7 APPENDIX G – Annual Certification of Compliance Forms



January 31, 2016
COR-16-012
Certified Mail # 7011 1730 0002 1870 8219

State of Alaska
ADEC Division of Water
Compliance and Enforcement
555 Cordova St.
Anchorage, AK 99501

RE: Pollution Discharge Elimination System (APDES) Permit No. AK-005334-1, Section 2.4.3 and MSGP for Stormwater Permit Tracking # AKR06AC58, Section 6.2.1, Annual Plan Review

Dear Compliance and Enforcement:

In accordance with Sumitomo Metal Mining Pogo LLC (Pogo) APDES Permit AK-005334-1, Section 2.4.3 and the MSGP for Stormwater Permit Tracking # AKR06AC58, Section 6.2.1, the General Manager and the Best Management Practices (BMP) committee completed their annual review of the BMP Plan. Pogo's BMP Plan was combined with Pogo's Stormwater Pollution Prevention Plan (SWPPP) in 2011. Enclosed is the 2015 Certification Statement with signatures of each BMP Committee member (called Stormwater Pollution Prevention Team in the SWPPP and BMP Plan). The SWPPP and BMP Plan has been updated and is available for Agency review upon request.

Sincerely,



Keri DePalma, CPG
Environmental Manager

cc: Dec-wreporting@alaska.gov

PogoMineAlaska.com | T: +1 907 895 2841 | F: +1 907 895 2868
P.O. Box 145, Delta Junction, AK 99737, USA | 3204 International Street, Fairbanks, AK 99701, USA

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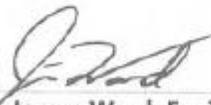
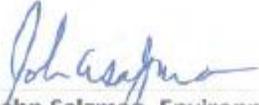
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SWPPP and DMP Plan

BMP Committee Annual Review Certification and Signatures

I certify I have reviewed the Stormwater Pollution Prevention Plan (SWPPP) and Best Management Practices Plan (BMPs) and that it fulfills the requirements set forth in the APDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity Permit Tracking Number AKR06AC58 and the APDES Individual Permit No. AK-0055334-1, Section 2.4.3 for an annual review of the BMP plan, Section 6.2.1.

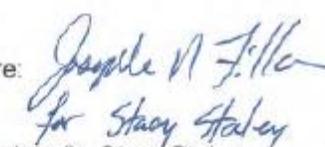
Signature: 	Date: 2-1-2016
Chris Kennedy, General Manager	
Signature: 	Date: 2-1-2016
Kim Threlkeld, Maintenance Manager	
Signature: 	Date: 02/01/16
Steve Steel, Health Safety & Loss Control Manager	
Signature: 	Date: 2/1/16
Keri DePalma, Environmental Manager	
Signature: 	Date: 1/31/16
Stacy Staley, Sr. Environmental Coordinator	
Signature: 	Date: 1/31/2016
James Ward, Environmental Specialist	
Signature: 	Date: 31-Jan-2016
John Salzman, Environmental Coordinator	

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BMP Committee Annual Review Certification and Signatures

I certify that I have reviewed the SWPPP and BMP Plan and that it fulfills the requirements set forth in APDES Permit No. AK-0055334-1, Section 2.4.3 for annual review of BMP plan.

Signature:		Date:	1-23-17
Name (printed):	Chris Kennedy	Title:	General Manager
Signature:		Date:	1/31/17
Name (printed):	Keri DePalma	Title:	Environmental Manager
Signature:		Date:	1/23/17
Name (printed):	Joe Filla	Title:	Environmental Engineer
Signature:	 for Stacy Staley	Date:	1/23/17
Name (printed):	Stacy Staley	Title:	Sr. Environmental Coordinator
Signature:		Date:	1-23-17
Name (printed):	Kim Threlkeld	Title:	Maintenance Manager
Signature:		Date:	01/23/17
Name (printed):	Steve Steel	Title:	Safety and Loss Control Manager

Prepared by:	Nathan Kehoe	Document Status:	Uncontrolled
Approved by:	Environmental Manager	Review Date:	11 May 2022
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STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

12.8 APPENDIX H – Training Attendance



TRAINING ATTENDANCE FORM

Event Name: Environmental Annual SWPPP Training 2020	Date: 1/22/2020 Start time 10 AM/PM
Event type: <input checked="" type="checkbox"/> Training <input type="checkbox"/> Meeting <input type="checkbox"/> Seminar/Information Session	Duration: 3-Hours
Trainer/Facilitator: Jillian Ladegard	Location/Venue: Chateau Conference Room

ATTENDEES					
#	NAME (CAPITAL LETTERS)	EMPLOYER	SITE	JOB-TITLE	SIGNATURE
1.	MIKE MURENBEELD	NSR	POGO	SNR. EXP GEO	<i>Mike Murenbeld</i>
2.	SCOTT ROBERTS	NSR	POGO	SNR. EXP GEO	<i>Scott Roberts</i>
3.	BRAD POLKOWSKI	NSR	POGO	EXP GEO TECH	<i>Bradley Polkowski</i>
4.	ROB MCGILL	NSR	POGO	EXP GEO	<i>Rob McGill</i>
5.	Dina Barkhoff	NSR	POGO	Environmental	<i>Dina Barkhoff</i>
6.	AMEE VAN REUSENING	NSR	POGO	SURFACE SUPERVISOR	<i>Amee van Reusening</i>
7.	KRIS JUKSD	NSR	POGO	SURFACE OPS	<i>Kris Juksd</i>
8.	Katie Schumacher	NSR	Pogo	Env. Engineer	<i>Katie Schumacher</i>
9.	Jillian Ladegard	NSR	Pogo	Env. Manager	called in from FBKS
10.	Jillian VanPotten	NSR	Pogo	Buyer	called in from FBKS
11.					
12.					
13.					
14.					

Prepared by:	Ashlon Yavich	Document Status:	Uncontrolled
Approved by:	Principal – Health and Safety	Review Date:	12/11/2020
		Approver's Signature:	Melissa Collins

Document No:	NSR-CHS-020-PCR
Revision No:	1.1
Issue Date:	12/11/2018
Page No:	1 of 2

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		Approver's Signature:	Jill Ladegard

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STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN



TRAINING ATTENDANCE FORM

Event Name: Environmental Annual SWPPP Training 2020	Date: 1/23/2020 Start time 0700 (AM) PM
Event type: <input checked="" type="checkbox"/> Training <input type="checkbox"/> Meeting <input type="checkbox"/> Seminar/Information Session	Duration: 3-Hours
Trainer/Facilitator: Jill Ladegard	Location/Venue: Chateau conference room

ATTENDEES					
#	NAME (CAPITAL LETTERS)	EMPLOYER	SITE	JOB TITLE	SIGNATURE
SWPPP Annual Refresher Training Jan 23, 2020					
	<u>Name:</u>	<u>Signature:</u>	<u>Department:</u>	<u>Date:</u>	
	Jill Ladegard	Jill Ladegard	Environmental	1/23/2020	
	Karl Sharp	Karl Sharp	Exploration Geol.	1/23/2020	
	DAVID MEACHER	DM Meacher	Exp Geol.	1/23/20	
	Nathan Kehoe	NKehoe	Environmental	1/23/2020	
	Sousa, Anthony	ASousa	Surface Ops	23 Jan 2020	
	Salzman, John E.	JSalzman	Environmental	23-Jan-2020	

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12.9 APPENDIX I – Compliance Form for Logging Companies



**LOGGING COMPANIES USING THE POGO ACCESS ROAD
COMPLIANCE GUIDE
POGO MINE STORMWATER POLLUTION PREVENTION PLAN**

As of August 2018, the Pogo access road is covered under the Multi-sector General Permit (MSGP) for the mine. In order for you to use the road, we are now requesting you adhere to our permit. By signing this form, (COMPANY NAME) agrees to adhere to the below items while using the Pogo access road.n-place Best Management Practices (BMPs) while using the road.

- Prevent sediment from logging roads from entering roadside ditches.
- Promptly Clean-up Spills: Contain and clean up spills, drips, and leaks that reach the Pogo access road or its ditches, other stormwater conveyances, or bridges. Follow Alaska Department of Environmental Conservation (ADEC) spill-reporting requirements.
- Control dust from logging operations from affecting the Pogo access road or its ditches, other stormwater conveyances, or bridges.
- If (COMPANY NAME) notices any stormwater pollution concerns, (COMPANY NAME) will promptly notify the Pogo Environmental group within 8 hours at (907) 895-2879 or (907) 895-2761.

FAILURE TO COMPLY WITH SWPPP procedures will result in termination of site access privileges.

ACCEPTANCE

I accept the above conditions and will adhere to the Pogo Mine SWPPP while using the access road. .

By: _____ Printed Name: _____

Title: _____ Date: _____

January 2020

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12.10 APPENDIX J – 2018 ADEC Correspondence

From: [Ashton, William S \(DEC\)](#)
To: [Christopher Darrah](#)
Cc: [jillian.ladegard@smmpogo.com](#); [Stacy Staley@smmpogo.com](#); [Valerie Webb](#); [Rypkema, James \(DEC\)](#)
Subject: Response to Pogo Mine MSGP SWPPP questions
Date: Monday, August 13, 2018 3:48:13 PM
Attachments: [image007.png](#)
[image008.png](#)
[image009.png](#)
[image010.png](#)
[image011.png](#)
[image012.png](#)

Chris,

Thank you for the questions concerning the scope of coverage under the Multi-Sector General Permit for the Pogo Access road. See the following for our answers:

- Is it ADEC's position that this access road should not be considered part of Pogo Mine's industrial operations subject to coverage of their MSGP SWPPP?

Pogo maintains control of access and does maintenance of the road so it has control over the road as part of access to its facility. In the MSGP Part 11.G.1.2 storm water discharges from access roads are included in coverage under the permit. So the access road is subject to inclusion in the MSGP SWPPP.

- Should storm water runoff from the access road be considered a discharge?

Where the runoff collects in a ditch and flows in a conveyance (a ditch or culvert) and discharges into a water of the US would be considered a storm water discharge for purposes of the MSGP.

- Should storm water dripping from the timber-plank bridge decks be considered a discharge?

No. This is uncollected runoff that does not flow through a conveyance, so is not considered a storm water discharge.

- Should gravel from passing vehicles that drops through the timber-plank bridge decks be considered storm water discharge?

No. Gravel is not considered a storm water discharge.

I hope this answers your questions. If you have any questions please contact me.

William Ashton

Storm Water & Wetlands
 Division of Water, Wastewater Discharge Authorization Program
 Alaska Dept. of Environmental Conservation
 555 Cordova St.
 Anchorage, AK 99501
 Ph 907-269-6283
William.ashton@alaska.gov

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STORM WATER POLLUTION PREVENTION PLAN AND BEST MANAGEMENT PRACTICES PLAN

From: Christopher Darrah [mailto:CBD@shanwil.com]
Sent: Thursday, August 09, 2018 1:45 PM
To: Ashton, William S (DEC) <william.ashton@alaska.gov>
Cc: jillian.ladegard@smpogo.com; Stacy.Staley@smpogo.com; Valerie Webb <VEW@shanwil.com>; Christopher Darrah <CBD@shanwil.com>
Subject: Pogo Mine MSGP SWPPP questions

Hi, William.

Thank you for taking the time to talk with me about the Pogo Mine MSGP last Tuesday. I am following up with some questions that I hope you can weigh in on. Some background: The gravel access road between the Richardson Highway and Pogo Mine is approximately 52 miles long and includes four stream-crossing bridges. Pogo leases the road from ADNR, and controls access and maintains this road. The road was constructed in 2004 but is now only subject to maintenance on an as-needed basis. The bridges are constructed of steel-beam spans with timber-plank decking. There are gaps between planks that allow gravel from vehicles to drop into the stream or river below. There are also two similarly constructed bridges on the mine site that are included in the SWPPP.

- Is it ADEC’s position that this access road should not be considered part of Pogo Mine’s industrial operations subject to coverage of their MSGP SWPPP?
- Should stormwater runoff from the access road be considered a discharge?
- Should stormwater dripping from the timber-plank bridge decks be considered a discharge?
- Should gravel from passing vehicles that drops through the timber-plank bridge decks be considered stormwater discharge?

Please don’t hesitate to call me if you have any questions.
 Thanks again,
 Chris

Chris Darrah, C.P.G., CPESC
 Vice President, Fairbanks Branch Manager
 2355 Hill Road
 Fairbanks, Alaska 99709
www.shannonwilson.com
 Phone: (907) 479-0600 Fax: (907) 479-5691
 Direct: (907) 458-3143 cbd@shanwil.com

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